U.S. CONGRESS. HOUSE. COMMITTEE ON GOVERNMENT OPERATIONS.

# ADMINISTRATION OF GRANTS BY THE NATIONAL INSTITUTES OF HEALTH

Union Calendar No. 811
'th Congress, 2d Session - - - - - - House Report No. 1958

# ADMINISTRATION OF GRANTS BY THE NATIONAL INSTITUTES OF HEALTH

(Reexamination of Management Deficiencies)

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## TWENTY-FIRST REPORT

BY THE

## COMMITTEE ON GOVERNMENT OPERATIONS



JUNE 30, 1962.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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## LETTER OF TRANSMITTAL

HOUSE OF REPRESENTATIVES,
*Washington, D.C., June 30, 1962.*

Hon. JOHN MCCORMACK,
*Speaker of the House of Representatives,*
*Washington, D.C.*

DEAR MR. SPEAKER: By direction of the Committee on Government Operations, I submit herewith the committee's twenty-first report to the 87th Congress. The committee's report is based on a study made by its Intergovernmental Relations Subcommittee.

WILLIAM L. DAWSON, *Chairman.*

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## APPENDIXES

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87TH CONGRESS, 2d Session } HOUSE OF REPRESENTATIVES { REPORT No. 1958

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JUNE 30, 1962.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. DAWSON, from the Committee on Government Operations, submitted the following

## TWENTY-FIRST REPORT

### BASED ON A STUDY BY THE INTERGOVERNMENTAL RELATIONS SUBCOMMITTEE

On June 28, 1962, the Committee on Government Operations had before it for consideration a report entitled "Administration of Grants by the National Institutes of Health (Reexamination of Management Deficiencies)." Upon motion made and seconded, the report was approved and adopted as the report of the full committee. The chairman was directed to transmit a copy to the Speaker of the House.

## I. INTRODUCTION

On April 28, 1961, the Committee on Government Operations issued a comprehensive report on the health research and training grant programs administered by the National Institutes of Health (NIH), a bureau and the principal research arm of the Public Health Service in the Department of Health, Education, and Welfare.

The report,[1] which was based on more than 2 years of study by the staff of the committee's Intergovernmental Relations Subcommittee, identified areas of weakness in the management of these programs and made recommendations for corrective action.

The NIH grant programs have special significance not only because they are important for improving the health of our people but also

[1] "Health Research and Training: the Administration of Grants and Awards by the National Institutes of Health." Second report by the Committee on Government Operations (H. Rept. No. 321, 87th Cong., 1st sess.).

because the Federal Government has increased its financial support for these programs at an unusually rapid rate. Appropriations for NIH, excluding construction funds, have increased from $46.4 million in 1950 to $736.5 million in 1962, or nearly 16-fold. Of these amounts, the appropriations for research and training grants to nongovernmental scientists have increased during the same period from $21.9 to $581.2 million, or by more than 26 times. The amount appropriated for research grants alone was $433.7 million for the fiscal year 1962.

Public hearings were held by the Intergovernmental Relations Subcommittee on August 1 and 2, 1961, in which the Surgeon General of the Public Health Service and the Director and other officials of NIH discussed the committee's recommendations and NIH's plans for implementing them.

The subcommittee held public hearings again on March 28, 29, and 30, 1962, to review the progress made by NIH in strengthening the management of its grant programs.

To provide an orderly development of the report, the committee's concluding observations and recommendations are presented in section VI, following the sections dealing with the committee's earlier findings and recommendations on the NIH grant programs (H. Rept. No. 321), the NIH response to those recommendations, the results of a special audit of NIH grant expenditures by a company which has received substantial NIH support, and the proceedings of the subcommittee's hearings held in March 1962.

## II. EARLIER FINDINGS AND RECOMMENDATIONS

A summary of the committee's findings and its recommendations in House Report No. 321 (87th Cong.) are presented below.

### SUMMARY OF EARLIER FINDINGS

The committee found that NIH is not adequately organized to administer the grant programs with maximum effectiveness. In particular, NIH has failed to provide for a meaningful review of the financial requirements of research projects as part of the technical review process. Further, NIH does not maintain sufficient direct and continuous contact with grantees for the purpose of determining appropriate levels of continuation support in relation to project accomplishments and needs.

At present NIH makes commitments for the future support of projects in specified amounts for periods as long as 8 or more years. Ordinarily there is no further review of project requirements during this period, and the amount of the grant is paid automatically each year upon request. The grantee, on the other hand, may request supplemental amounts to meet unforeseen project expenses. This arrangement, obviously, is not conducive to the most prudent use of grant funds.

The present management policies and procedures are especially unsatisfactory in connection with research grants to commercial firms and for the support of meetings of scientific organizations.

The committee noted areas where existing grant arrangements are not designed to obtain full advantage from the available or potential research resources of educational institutions. These areas have been identified and recommendations offered for bringing such institutions more actively into the national health research effort.

The committee believes that economies and greater efficiency can be achieved through the development of more uniform policies and procedures in connection with the many special purpose training programs supported by NIH.

The committee gave close attention to the problem of appropriate Federal payment for the indirect or overhead costs associated with grant-supported research. The committee recommended an equitable indirect cost arrangement for the use of all Government agencies that support research in educational institutions.

### EARLIER RECOMMENDATIONS

*Recommendation No. 1.*—Additional measures be taken to improve the effectiveness of the present project review system:

First: The scientific review conducted by the study sections should be complemented by a thorough review of each project's financial requirements performed by qualified analysts in the Division of Research Grants.

At the present time the study sections do concern themselves with the reasonableness of budget requests in relation to the work proposed, and this is an essential part of judging a project's feasibility. This, however, is not the type of systematic budget examination that is required to satisfy NIH's administrative responsibility.

Second: NIH should consider the feasibility of forming field review teams composed of staff representatives to visit grantee institutions on a regular basis, perhaps once a year.

Direct contact with grantees is now limited to the site visit, which is made for only a small proportion of grants, at the time of the original project application. Some form of continuing contact is needed to observe the progress of certain projects and to obtain the necessary information for meaningful review of budgetary needs.

Third: NIH should determine the dollar amount of support, for projects receiving grant commitments for extended periods of time, at frequent intervals and on the basis of an adequate review of program accomplishment, potential, and financial needs.

The committee does not believe that specific dollar amounts based on original budget estimates can realistically represent the investigator's needs 3 to 8 years in the future. The committee is concerned by the fact that under present procedures substantial amounts of supplemental funds are provided grantees ($10.8 million in 1960, or more than 5 percent of total grant funds), while grant money paid on the basis of original project estimates is rarely returned to the Government as unneeded.

Fourth: Special advisory committees should be organized to review grants which are intended to provide general support for whole programs or divisions of institutions.

Large grants of this kind are not for "projects" in the conventional sense and, consequently, require a special type of review by a competent body.

*Recommendation No. 2.*—Grants for projects initiated by commercial firms be placed on a cost-sharing basis. The committee believes this action, together with implementation of its recommendations for strengthening the review of projects and the management of grants, will place grants to commercial firms on a sounder foundation.

When grants are used to support research in organizations operating for profit, the Government has relatively little assurance under present procedures that public funds will be used economically and with concern primarily for research performance rather than private gain. The committee has found disturbing evidence of the abuse of grants by commercial firms.

*Recommendation No. 3.*—NIH develop a separate policy governing the purpose and use of, and the eligibility conditions for, grants to help support national and international meetings of recognized scientific organizations.

Extravagance and financial irregularities have been found in the handling of grant funds by conference planning groups. The committee believes that policies and procedures designed for the support of scientific investigations should not be applied to conference grants. Instead, the recipients of conference support should be held strictly accountable for funds in accordance with their approved grant proposals.

*Recommendation No. 4.*—NIH seek to further improve its methods for coordinating research activities with other Government and private agencies so as to minimize unnecessary or unintended duplication of research in the health field.

The committee recognizes that NIH has developed workable arrangements for avoiding undesirable duplication of project support. However, certain gaps exist which should be remedied.

*Recommendation No. 5.*—The President establish a uniform policy with respect to acceptable salary practices in the use of Federal research funds applicable to all Federal agencies making grants to educational and other research institutions.

The committee supports the principle of compensating the participants in Government-supported research in accordance with the regular salary schedules of their institutions, and is concerned by reports that some institutions are using Federal funds to pay higher than regular salaries. Since this is a matter of concern to many Federal agencies, the committee feels it should be dealt with on a Government-wide basis.

*Recommendation No. 6.*—NIH initiate for a limited time a special developmental-type grant as a direct means of stimulating research capability in those universities and professional schools which have training responsibilities in scientific fields related to health, but are not actively engaged in health research.

It appears that the limited participation of some universities and professional schools in the NIH research program is due more to the paucity of project applications than to a high disapproval rate of proposals. The stimulation of research activities in these institutions is desirable not only to increase their research contribution, but also to improve their training capabilities in the health-related sciences.

*Recommendation No. 7.*—The Congress consider action to permit the awarding of research project grants under the Public Health Service Act to VA hospitals on the same terms and conditions as apply to non-Federal institutions.

Under present arrangements, only the scientific personnel of those VA hospitals which have a medical school affiliation are permitted to compete for NIH grants. Such applications are routed through the schools which thereby become eligible for the 15-percent indirect cost allowance on projects conducted in the VA hospitals. Permitting project applications to be made directly to NIH would, for the first time, enable the professional staff in more than 25 percent of the VA hospitals with research programs to compete for NIH grants. The committee does not view this recommended action as a substitute for research programed from VA appropriations.

*Recommendation No. 8.*—The Director of NIH review the training policies and procedures of the Institutes and the Division of General Medical Sciences for the purpose of obtaining a greater degree of uniformity and simplification.

Some variation in policies and practices may be necessary in view of the individualized nature of NIH training programs. However, many of the differences observed by the committee appear to be due to the lack of central direction and coordination. To the extent that these differences are not essential for the success of the programs concerned, they are likely to cause waste and inefficiency within NIH and to impose an unnecessary administrative burden on training institutions.

*Recommendation No. 9.*—The Secretary of Health, Education, and Welfare carefully examines the existing programs and administrative arrangements for special-purpose training in the health field both in terms of overall Federal objectives in support of education and the impact of these programs on our educational institutions.

The highly specialized character of NIH and other Public Health Service training programs raises two closely related questions: (1) Would it be more advantageous for the Government to combine the great variety of special-purpose training grants into a limited number of grants for strengthening the curriculum generally of those institutions which train health personnel; and (2) is training support as presently administered in the health field injurious to the institutions concerned?

*Recommendation No. 10.*—The appropriate executive agencies and committees of the Congress give particular attention to the problem of attracting outstanding students to the field of medicine.

Evidence has been presented by the Surgeon General's Consultant Group and others that the quality of medical students has been decreasing in recent years. The committee is concerned that present Federal policies may be a factor in diverting good students from the field of medicine. The quality of students receiving medical training has an important bearing on the success of NIH programs for health research and medical manpower training.

*Recommendation No. 11.*—Each participating institution be given the option of using either of two methods for computing the overhead allowance on supported research. One method would be the continued use of a flat rate adjusted periodically to equal approximately 50 percent of the average rate of indirect expenses based on total direct costs for all grantee institutions as a group, as measured by appropriate cost accounting principles and procedures. In lieu of the standard rate, and in order to provide equitable treatment for those institutions possessing relatively high overhead costs, an institution would be allowed 50 percent of its actual indirect cost rate determined in the same manner as above.

The committee finds considerable merit, in theory, to the concept of Federal participation in indirect costs to the extent that they are brought into existence or actually increased by grant-supported projects. These additional or "incremental" costs, unfortunately, are not ordinarily susceptible of objective measurement. As a practical alternative, the committee favors the aforementioned arrangements. The figure of 50 percent was selected as a rough estimate and could be adjusted as reliable data are obtained on incremental costs.

*Recommendation No. 12.*—No overhead be allowed on grants or grant items which do not entail actual indirect expenses, and an amount less than the regular rate be allowed when extramural research requires few institutional services.

The overhead allowance should not apply, for example, to grant amounts for the rental of furnished quarters or of computer time where the rent figure already contains an indirect cost factor to cover such things as light, heat, maintenance, and janitorial service. An amount less than the regular rate would be appropriate in those instances where extramural research requires few institutional services or where the institution serves merely as a "paper middleman."

*Recommendation No. 13.*—NIH reexamine its policy of making indirect cost payments on renovation and major equipment expenditures from grants for the establishment of clinical research facilities.

This new program involving substantial amounts for the remodeling of buildings and the purchase of furnishings and equipment does not appear to create significant overhead expenses related to these expenditures.

## III. NATIONAL INSTITUTES OF HEALTH RESPONSE

In general, the agency concurred with the committee's findings and recommendations in House Report No. 321. Both by correspondence and in the hearings held in August 1961, officials of NIH and the Public Health Service expressed substantial agreement with all but one of the recommendations and indicated their intention to take corrective action.

In commenting on the report prior to its formal adoption by the committee, the Director of NIH wrote the chairman of the Intergovernmental Relations Subcommittee on April 25, 1961:

> I should like to express my sincere appreciation for the opportunity to offer comment on this excellent report. While most of the recommendations would be entirely acceptable to the National Institutes of Health, there are several on which I should like to make statements.

Except for disagreement with recommendation No. 7 (concerning the awarding of research project grants to scientists employed in VA hospitals on the same basis as to scientists in non-Federal institutions), the Director's comments related to the method of implementation rather than to the merit of the recommendations. With respect to recommendation No. 7, NIH objected to extending eligibility for research grants to all qualified VA scientists on the grounds that NIH preferred limiting grants to VA employees who simultaneously hold medical school faculty positions. However, as was pointed out in the committee's report and in hearings, it has been the practice of NIH to accept grant applications from all qualified personnel of the VA hospitals which have a medical school affiliation, rather than exclusively from those VA employees who hold medical school staff appointments. The committee's recommendation was intended to promote the fuller utilization of our scientific resources by extending eligibility for NIH grants to highly qualified scientists employed in the VA hospitals which are not located in proximity to a medical school and who receive the approval of their hospitals to participate in the NIH programs. The President made a similar recommendation in the budgets for the fiscal years 1962 and 1963.

In transmitting a press release to the chairman of the subcommittee the Surgeon General wrote on May 12, 1961:

> You will note from the enclosed statement that I feel your study and report have rendered a service to the national research effort.

Subsequently, in transmitting an interim report of June 15, 1961, describing the actions taken by NIH in response to the committee's recommendations, the Surgeon General wrote:

> It gives me real pleasure to transmit to you this interim report which describes the current status of actions taken by the

NIH with respect to each of the recommendations contained in your report. Again, may I compliment you upon a searching and constructive inquiry into the growing and complex set of activities administered by the National Institutes of Health. I am confident that many of the committee recommendations will be adopted more easily by reason of your independent recognition of their significance.

The Surgeon General testified in hearings held by the Intergovernmental Relations Subcommittee on August 1, 1961, at which time he stated:

> Although the Public Health Service activities are constantly under review, there is a tendency for long-established systems and procedures to appear adequate to those familiar with them even when they may no longer meet all of the new requirements imposed upon them by the growth or the changed character of the programs they serve. A critical review by an objective outside group is therefore of great assistance in calling attention to slowly growing but as yet unobserved administrative deficiencies.
>
> It is in this light in which I view and warmly welcome the report's comments on the administration of the NIH grant and award programs. The intelligent examination of recent practices and the thoughtful recommendations for their improvement are very helpful in focusing attention on problem areas and suggesting the need for revised procedures.
>
> I want to assure the committee that each criticism is being most carefully examined and each recommendation most seriously considered both in my office, by the Director of the NIH, and by those immediately responsible for the grant administration at NIH.[2]

In the same hearings the Director of NIH testified:

> A good case can be made—as is done in the committee's report—for a more businesslike approach to research project costs. We have therefore decided to modify our procedures with a view to asking the study sections and councils, in effect, to set a dollar ceiling for each grant they approve, leaving the exact amount to be paid to be negotiated, when necessary, by the staff. It would be quite impractical to ask the study sections to do this. Their members are purposely chosen for their scientific competence—they have neither the background, the time, nor the inclination to act as budget examiners.
>
> As some 15,000 applications must be reviewed each year, the time needed for detailed budgetary reviews could alone make it impossible to use study sections for this purpose.
>
> The amount to be paid in subsequent "continuation" years of multiyear grants, and the purpose for which these funds will be used, will be similarly negotiated by the staff on the basis of actual need but within the ceiling set during the initial review process.[3]

[2] Hearings, p. 2.
[3] Hearings, p. 16.

In January 1962, the subcommittee requested that NIH furnish a detailed description of the agency's progress in carrying out each of the committee's recommendations made in House Report No. 321. The Acting Director of NIH, in replying to this request on January 22, wrote:

> We are in accord with the recommendations of your committee and definitely intend eventually to make all desirable changes needed to effect the sounder administration which your committee recommended.

The letters and progress reports referred to in this section are reproduced in appendix 1.

## IV. AUDIT OF NIH GRANTS TO PUBLIC SERVICE RESEARCH, INC.

An audit was made of the research grants awarded to Public Service Research, Inc., a commercial firm operating for profit, in order to provide detailed information on the adequacy of NIH policies and procedures for insuring the appropriate expenditure of public funds. The audit review was made in January 1962 with the assistance of personnel from the General Accounting Office. The audit covered the period of July 3, 1959–December 31, 1961, during which the company received $378,596, or 85 percent of its total cash funds, from NIH grants.

The subcommittee had previously found from NIH records that there were large discrepancies between the purposes for which the company had requested research grant funds and the manner in which these funds were reported as spent. Also, it had come to the subcommittee's attention that the company had used grant funds for the payment of fees to an affiliated company for the recruitment of personnel.

While the amount of NIH research funds paid to Public Service Research, Inc., represents only a small percentage of total NIH grant expenditures, NIH policies and management procedures provide no assurance that practices similar to those followed by this grantee are not widespread. Although NIH relies upon the grantee institutions for the effective management of grant funds, NIH conceded in hearings that adequate administrative machinery does not presently exist, either in NIH or in the grantee institutions, to insure that this responsibility is being met.

The audit findings are summarized below. The complete audit report appears in appendix 2.

### SUMMARY OF FINDINGS

(1) Grant funds were used to finance capital and other costs associated with establishing a new corporation. During the first year and a half of its existence, Public Service Research, Inc., acquired practically all of its office equipment and furnishings from Federal research grants and contracts.

(2) The corporation, according to its records, claimed a depreciation allowance in its Federal income tax returns for equipment purchased from NIH grants.

(3) The corporation's rent, maintenance, and moving expenses, and the expense of remodeling its rented quarters, were charged as direct costs to individual Federal grants and contracts.

(4) The corporation derived a profit in excess of its actual indirect costs from the overhead allowance (15 percent of total direct costs) paid by NIH to cover indirect costs.

(5) Fees paid by the corporation to its affiliate, Clark, Channell, Inc., for hiring expenses included a profit to the affiliate. Such fees

were improperly billed as direct costs to particular NIH projects; the persons for whom hiring fees were paid worked on several projects and, in one case, the employee performed no research on the project to which his fee was charged.

(6) Salary costs were improperly charged to NIH grants for (*a*) time spent by corporate officers in meetings of directors or stockholders and in the administration of corporation business; (*b*) time spent by a corporate officer as a consultant to NIH, for which he was also paid $50 a day plus travel expenses; and (*c*) an employee who was hired to staff the company's Washington office and performed no research on the project to which his salary was charged.

(7) Various expense items were incorrectly classified as direct costs of particular grant projects, and in several instances entertainment expenses were improperly charged to NIH grants.

(8) Travel expenses were incurred in some instances for purposes which do not appear to have a direct relationship to the projects charged.

## V. MARCH 1962 HEARINGS

Hearings were held by the subcommittee on March 28, 29, and 30, 1962, to obtain further information on the progress of NIH in implementing the committee's recommendations. These hearings were concerned principally with the administration of research grants.

The committee was informed that certain actions had been taken in response to several of its recommendations. First, grants for the support of conferences are no longer treated as research project grants; instead, more restrictive policies have been adopted with respect to the use and accountability of funds for this purpose. Second, NIH has broadened the availability of information on its research work and, therefore, has reduced the possibility of undesirable duplication of research in the health field by commencing to report on its intramural research projects to the Science Information Exchange—the agency which serves as a clearinghouse for grant information on research in the biomedical sciences. Third, NIH has taken action to exclude or negotiate the payment of indirect costs in certain instances where the direct expenses of a project either entail no significant overhead costs or indirect costs substantially lower than 15 percent.

However, it became evident in the course of the hearings that NIH has done relatively little to improve the overall management of its grant programs since the committee's report of April 1961. The committee is particularly concerned by the continued absence of sound procedures for determining the initial and the continuing financial needs of grantees.

### GRANT MANAGEMENT

In progress reports and in hearings, NIH officials had affirmed that the agency would strengthen its procedures and staff to obtain more effective examination of the financial requirements of research projects. This was to be accomplished through systematic staff negotiation to determine the actual amount of a grant within the ceiling approved by consultants in the course of Study Section and Advisory Council review. NIH proposed also that as an interim procedure its staff would evaluate the equipment needs of grantees, to avoid duplicate and nonessential purchases, by the examination of previous grant records together with the justifications contained in current applications.

NIH stated last August that its proposed procedures would be implemented by immediately assigning a budget analyst and an assistant to each of the seven Institutes and the Division of General Medical Sciences. The committee was informed that as of March 1962 only two professional and four nonprofessional staff had been assigned to devote full time to various aspects of grants management.

The committee last year found a need for some form of continuing contact between NIH and its grantees to observe the progress of selected projects and to obtain feedback of information necessary for

meaningful and reliable budgetary as well as scientific review. For this purpose the committee recommended that NIH consider the feasibility of forming field review teams. In the hearings that followed the Director of NIH reacted favorably to this recommendation and said it was under study. Early this year the subcommittee was informed that until such a plan could be implemented NIH would improve its surveillance of the handling of grants by decentralizing this function to the several Institutes. However, nothing of consequence has yet been accomplished along these lines to meet the need outlined by the committee.

The committee is disappointed to find that little serious effort has been made to effectuate these measures. The data on staffing and on the minor extent to which the dollar requests of grantees are administratively examined show that there has been no significant improvement in the inadequate fiscal review of project requirements brought to light by the committee last year.

It is apparent from the subcommittee's recent hearings that weaknesses in the grant programs are due to causes more fundamental than staff inadequacies and faulty procedures. The committee believes these weaknesses are due in large measure to the failure of NIH officials to understand the nature of their responsibility for the management of public funds.

This is reflected in testimony given by the Director of NIH:

> The recipients are selected on the basis of a rigorous screening by their scientific peers. The idea and the man are both examined with care.
>
> This is the point at which the really significant administrative actions designed to make the program efficient and productive are taken. *Selection of good men and good ideas—and rejection of the inferior—is the key. All subsequent administrative actions having to do with the adjustment of budgets, and so forth, are essentially trivial in relation to this basic selection process.*[4]

The Director further stated:

> The research grant is, in essence, a trust. It is an award made to an individual or group after a critical examination of past performance and of the proposed line of research. Once the award is made, the use of granted funds is left to the investigator and the institution. They are accountable for exercising the trusteeship responsibility.
>
> This is in marked contrast with the essential idea of a contract, which is a promise by a contractee to deliver a predetermined product to a contractor for a predetermined price.
>
> In actual operation, research grants and research contracts are not always so widely separated. But the essential difference exists. *A grant is a trust which makes the effective expenditure of funds the responsibility of the recipient.* A contract is for specific performance—production of something for the contractor for a price and under terms set by the contractor.

[4] Hearings, p. 14. [Emphasis added.]

> Under a contract, the purchaser has the right and the obligation to check on any relevant detail of the expenditure of funds. NIH uses research contracts under appropriate circumstances, but the research grant is the device to which the committee's inquiry has been directed.
>
> Mr. Chairman, it has been my observation that many of the committee's inquiries seemed to rest implicitly upon the assumption that we are—or should be—operating a research contract and not a research grant system. We deliberately do not do many things which are necessary and proper under a contract system. The question from our point of view is not whether we do these things well, but whether we should do them at all.[5]

The committee cannot accept the NIH view that administrative actions for the effective and economical expenditure of grant funds are "trivial" or are matters of little importance. Nor can the committee agree that the choice of the grant rather than the contract as the device for supporting research relieves NIH of normal responsibility for the proper and prudent expenditure of Government funds.

While the manner of obtaining accountability and the required degree of adherence to the research plan may differ under a grant and a contract, the committee believes that a Government agency is equally responsible for the proper, efficient, and economical use of public funds irrespective of the fiscal instrument employed.

The committee is aware of the utility of the grant as a means of supporting basic research in an academic environment and does not intend its criticism of NIH grant administration to imply a preference for contracts. It might be noted, however, that other Federal agencies, notably the Atomic Energy Commission, use contracts extensively to support basic research in the same institutions and for many of the very same investigators whom NIH assists.

Under questioning, the NIH Director amplified his prepared statement, quoted above, in the following exchange:

> Mr. Fountain. Dr. Shannon, I want to be sure that the subcommittee understands your statement. While I didn't so construe it, one of the members of the subcommittee told me that he interpreted your statement to mean that any attempt to strengthen management procedures or reduce waste would be bureaucratic and infringe on scientific freedom.
>
> Dr. Shannon. Oh, no, sir; I didn't mean that.
>
> Mr. Fountain. I didn't think you intended to give that impression.
>
> Dr. Shannon. No, sir.
>
> Mr. Fountain. Do you still agree with us that management procedures should be strengthened in these areas, and will be strengthened?
>
> Dr. Shannon. Yes, sir; and we accept Dr. Goldberg's view that the progress in recruiting people appears to be quite slow. It is. I attempted to explain that. There are two areas of difficulty: One is the uphill battle we have with some of our own people to accept such a plan. But we are making

[5] Hearings, p. 15. [Emphasis added.]

progress, and the meeting last week was illustrative of our attempts to resolve the difficulties.[6]

With respect to NIH's acknowledged reliance upon the investigator's institution to assure the careful expenditure of grant funds for equipment, travel, etc., the hearings revealed there is reason to doubt that institutions are adequately performing this responsibility. The Director of NIH testified:

> The thing that we would propose to do is to try to push as hard as we can for better management within the institutions, and to provide the institutions with the resources to undertake better management. I truly believe that a decentralized system such as we operate within the framework of a grant—which, in the final analysis, whether rightly or wrongly, is a conditional gift—involves a partnership both in the doing and in the responsibility for what is done. The institution must share with the Federal agency, whether it be NIH or AEC or any of the others, the responsibility to expend those funds rightfully and prudently.
>
> I don't think that this is being done adequately at the present time. We propose to try, during the coming year, to work out the mechanics that will give us better assurance that it is being done.[7]

He acknowledged in this connection:

> In view of our basic concept of how the grant operation can most properly be conducted in this complex situation, I feel that we have been deficient in not making explicitly clear to the institutions the obligations they assume when they accept a grant, the functions that we expect them to perform, and the functions that we will perform.
>
> I think this is what we have to remedy above all else.[8]

The Director commented further on the need for strengthening grant management both within NIH and in the grantee institutions:

> Because of some of the discussion that took place yesterday, I am increasingly aware that it probably is necessary to develop internal mechanisms that will make more abundantly clear to the supported institutions the specific areas upon which we, in our partnership with them, must depend for their judgments.
>
> These areas at the present time are, I believe, generally understood. When I say generally understood, I have in mind such broad matters as personnel policies, equipment purchases, and things of that general sort.
>
> What I think we have not done, on the other hand, is to set up an organizational entity at NIH that can, in fact, assure us that the institutions in receipt of our grants have, in all cases, a highly organized central organization and the capabilities for doing those things which we say can only be done by the local institution and cannot be done centrally.

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[6] Hearings, p. 36.
[7] Hearings, pp. 64–65.
[8] Hearings, p. 62.

I think for us to take the position that certain things that have been proposed are not meaningful if done centrally does not discharge our responsibility for seeing that they are done.

We have to assume responsibility for being certain that those areas of grant management that cannot be handled centrally are handled and can be handled locally. * * * we have not specifically indicated to the institution that when the head of a department or the head of the institution signs a research grant application or approves the purchase of a substantial piece of equipment, he has the direct obligation to NIH, and through NIH to the taxpayer, for having carefully considered the need for this piece of equipment and determined that the expenditure is a prudent one.[9]

### GRANTS TO COMMERCIAL ORGANIZATIONS

NIH proposed in the hearings that in the future the agency support research in companies operating for profit by contracts rather than by grants.

With reference to Public Service Research, Inc., the company whose NIH grant expenditures were audited by the subcommittee, the Director of NIH testified:

I think these grants were made under guidelines that were in error. It was done under a judgment which we now see to be an error. This was a very positive judgment on our part that we could handle grants to commercial firms in the same way as we did to institutions of higher education.

As I say, I think that this was in error. I don't think that it was lax in the sense that we did this without—we made a poor judgment.[10]

He further stated in this connection:

I said yesterday that I had concluded that we should only deal with commercial firms in the future via contracts. This is not to say that a contract is invulnerable to misuse or that, automatically, when one does things by contract, as opposed to support by grants, one has conditions that are more or less restricting.

In point of fact, as you well know, sir, a contract can be as loose as a grant; or a grant can be as tight as a contract.

I have more reference to the contexts within which we operate contracts and operate grants.

A contract with the NIH automatically assures the participation by an NIH project officer, who will be concerned with the substance of the work done as well as with the generalities of the support in terms of long-range objectives.

A project officer is required to know much more about the details of how the work is conducted, as well as what the end results of the work are.

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[9] Hearings, pp. 45–46.
[10] Hearings, pp. 75–76.

> We do not run a contract operation on a very broad scale in the general areas of our work, although we do run quite a broad contract program in cancer chemotherapy.
>
> We are not staffed to conduct a broad contract operation along the restrictive lines that I have indicated. It was deficiencies of staff that led us to attempt to use a modified grant by putting restrictive clauses in the terms of the grant.
>
> But I am convinced now that this is inadequate. I think that this was a refuge we took in weakness rather than from strength.[11]

### INDIRECT COSTS

The committee sought last year to clarify the nature of the indirect costs of research and their measurement. An institution's indirect or overhead costs are those incurred for facilities and services (e.g., general administration, library, heat, and light) which are jointly used for teaching, research, and other purposes and, therefore, cannot be allocated directly to a single project or program. It was the committee's view that, with respect to the Government's obligation for the payment of indirect costs, there is a difference between purchased research performed for a Federal agency and the support of nondirected research which is closely related to an institution's educational program and from which the institution's faculty and students benefit. With regard to the latter, the committee expressed the belief that institutions which engage in this type of research as a normal activity should continue to pay the costs of basic administrative and auxiliary services that exist primarily for regular institutional purposes but are used also for Government-supported projects.

The committee proposed, accordingly, that the determination of indirect costs take into account the extent to which such costs are brought into existence or increased by grant-supported research. In effect, this means that the indirect cost rate applicable to supported research in any institution will be lower than the indirect cost rate for purchased research.

In testifying before the subcommittee, the Director of NIH endorsed this view and agreed that Budget Bureau Circular A–21 [12] includes expense items which should not be charged to the Government in connection with grant supported research. He said:

> Lest there be any misunderstanding, let me tell you what I mean when I say "full indirect costs." I do not mean full indirect costs in the sense that you have used it. I do not feel we should undertake the payment of some of the liberalization of A–21. In our discussion with Mr. Fogarty in relation to this, we have used the term "additional costs" or "costs attributable to the additional activities."

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[11] Hearings, p. 45.

[12] Circular A–21, first issued by the Bureau of the Budget in September 1958, contains accounting principles which provide the basis for a uniform approach to determining the allowable costs of research performed by educational institutions under Federal contracts or grants. Circular A–21 is intended to measure an institution's applicable research costs, both direct and indirect, as a basis for negotiating the extent of Federal participation in the financing of a particular project.

Now, the difficulty here is that this can only be calculated once. Once this has been blanketed in, then you do not have a basis for continued computation.

But what I really would like to see is for us to pay the cost that is over and above that which the institution would have to carry, in the absence of our making funds available to undertake certain specific additional activities.[13]

[13] Hearings, p. 87.

## VI. CONCLUDING OBSERVATIONS AND RECOMMENDATIONS

### GRANT MANAGEMENT

The committee is dissatisfied with the slow progress which NIH has made to strengthen the management of the grant programs for health research. While NIH has acted in several areas in response to the committee's recommendations, relatively little effort has been made to improve the overall management of these important grant programs. In particular, the committee has found no significant improvement in the inadequate fiscal review of project requirements on which it reported last year.

In the absence of appropriate policies, procedures, and adequate staffing, the nongovernmental scientists who serve on study sections are, in effect, determining the budgetary needs of research projects. Yet, the Director of NIH has testified that these consultants have neither the background, the time, nor the inclination to act as budget examiners. The committee stated in its report last year that the responsibiliy for obtaining the efficient and economical use of public funds cannot properly be delegated to advisory bodies. This is unquestionably the responsibility of NIH officials.

The committee has called attention also to the fact that a grantee who obtains a commitment for long-term support has unlimited freedom under NIH policy to change the subject matter of his approved project without further review. While this policy may have merit from a scientific standpoint, it is questionable that grant funds can properly be used under NIH's research project authority for a purpose other than the scientific problem or area of research which NIH reviewed and approved for support.

The committee has proposed in this connection that NIH use field review teams, or some other method, to maintain continuing contact with grantees so as to provide an adequate feedback of information relating to the progress and budgetary needs of projects. The committee recommended further that for projects approved for long-term support, NIH determine the amount of each grant at frequent intervals on the basis of an adequate review of project accomplishment, project potential, and financial need. NIH has not yet taken effective action in these areas.

The adequacy of NIH policies and procedures for insuring the appropriate expenditure of research funds was tested earlier this year by means of a detailed audit of the grants awarded to Public Service Research, Inc., a company which has received substantial NIH support. The audit report, which is reproduced in appendix 2, disclosed that the company misused and profited from grant funds and, in general, the company used the very broad discretion which NIH allows grantees in expending research money for its own advantage.

The audit also disclosed poor coordination between NIH and the

Public Health Service, of which NIH is a part. NIH continued to pay Public Service Research, Inc., a 15-percent indirect cost allowance on grants after the Public Health Service had established an indirect cost rate of 6.66 percent for the company in connection with a research contract. Following completion of the contract, the Public Health Service permitted the company to retain Government-owned equipment for use in connection with an NIH grant but made no effort to ascertain that the equipment was necessary for the NIH project. Shortly thereafter, NIH awarded a new grant to the company which included funds for the purchase of equipment similar to that which the company already had in its possession from the completed Public Health Service contract.

The suggestion has been made that the findings of this audit are not applicable to most NIH grants, since the grantee in this instance is a company operating for profit while most NIH grants are made to nonprofit institutions. This reasoning misses the essential point that under its present inadequate administrative arrangements NIH does not know whether or not grant funds are expended prudently and for the intended purposes and, consequently, NIH cannot provide reasonable assurance that the misuse of grants is not widespread.

## SCIENTIFIC FREEDOM

The committee wishes to emphasize that it is fully committed to the principle of allowing scientific investigators the greatest possible freedom of action in carrying out their research. The history of science clearly demonstrates that scientific achievement and progress have generally occurred under conditions which allow maximum freedom of inquiry for the investigator.

However, freedom for the scientist should not be confused with license or fiscal irresponsibility. One cannot condone waste and extravagance wherever it exists as being either in the public interest or in the interest of science. Grant money that is uneconomically or inefficiently spent deprives other scientists of support for their work. Moreover, the injudicious use of research funds is grossly unfair to the American public which is required to support this activity through taxation. What we must achieve is a harmonizing of freedom for the investigator with responsibility to the public in the expenditure of Government funds. NIH has the obligation to develop adequate policies and procedures for assuring that grant funds are prudently spent within this context.

## GRANT POLICIES

The committee believes there is need for NIH to give special attention to improving its policies relating to grant expenditures for salaries, equipment, and travel. Certain policies which appear to be appropriate and feasible at this time are discussed below.

*Salaries.*—The committee reported last year that it supports the principle of compensating the participants in Government-supported research in accordance with the regular salary schedules of their institutions, and that it is concerned by reports that some institutions are using Federal funds to pay higher than regular salaries. Since this is a matter of concern to many Federal agencies, the committee felt

it should be dealt with on a Government-wide basis rather than by NIH alone. However, it is each agency's responsibility to ascertain that salaries charged to a grant properly represent the proportion of each investigator's work actually devoted to the project. The committee was recently informed that NIH has agreed to establish a procedure which will insure that salary charges are not made to research grants for time devoted to other activities.

*Equipment.*—The committee has found that grant funds are unnecessarily spent for the purchase of duplicate or other nonessential items of equipment. The excessive purchase of equipment is undoubtedly due to a combination of factors, including inadequate NIH review of equipment needs, the almost unlimited freedom permitted scientific investigators in expending funds, and the fact that institutions normally do not assume a direct and positive responsibility for the expenditure of project funds.

It is estimated that at the present time more than $1 million a year is spent from regular research grants for the purchase of office equipment and furnishings, as distinguished from scientific equipment. The committee believes much of this expenditure is unnecessary for the performance of research. Accordingly, *the committee recommends that NIH change its policy so that the purchase of office equipment and furnishings from grants will not be permitted except in special circumstances.* Testimony was received from NIH in the recent subcommittee hearings that it favors this recommendation and will act to implement it.

*The committee recommends also that NIH require, as a grant condition, that scientific equipment purchased for a research project remain with the project when the principal investigator changes institutions, unless transfer of the equipment is found to be uneconomical.* Under existing practice, the equipment is treated as the property of the institution receiving the grant and is usually purchased again from grant funds for use in the investigator's new institution.

*Travel.*—It has become the accepted practice that grantees request and NIH allows funds for travel as a part of the grant award. The travel expenditures of grantees are estimated to be about 2.5 percent of total project costs, with approximately 15 percent of all travel being used for trips outside the United States. At the present time approximately $7½ million is being spent for travel from regular project grants.

The committee recognizes that travel is a necessary and appropriate expense item for many research projects. On the other hand, a substantial amount of research funds is being spent for attending professional society meetings, conferences, etc., which are not essential to NIH projects. It is noteworthy that in some instances scientists devoting only a portion of their time to NIH projects may have a number of individual grants and obtain travel funds from each. Moreover, under NIH policy, grantees may freely use funds requested for other purposes for travel.

At the present time NIH provides grantees no policy guidance on travel, leaving the type and amount of travel completely to the discretion of the investigator and his institution. However, NIH does have a policy governing allowable travel for its own scientists. The

committee sees little merit in permitting nongovernmental scientists to use grant funds for attending professional meetings or for making routine visits to other laboratories on a more liberal basis than NIH's own scientists.

*The committee believes NIH should critcially examine budget requests for travel before awarding grants, and restrict the transfer of funds for this purpose when travel requests are disapproved. Further, grant funds should not be used for travel to professional meetings which are not essential to the project in cases where the scientist involved devotes only a minor part of his worktime to NIH projects.*

### GRANTS TO COMMERCIAL ORGANIZATIONS

The committee has been advised that the Department of Health, Education, and Welfare has adopted the policy that its constituent agencies will restrict research grants to public or private nonprofit institutions or agencies, and will use contracts exclusively to support research in organizations operating for profit. While the committee agrees that a contract, if properly administered, is preferable to a grant for providing research support in commercial organizations, the problem to which the committee has called attention is not solved simply by substituting one type of financial instrument for another. The principal need is the formulation and effectuation of policies and procedures which will assure the most effective and careful use of research funds.

The committee recommended last year that grants for research projects initiated by commercial organizations be placed on a cost-sharing basis. It was the committee's conviction that the Congress did not intend these health research funds to be used for private profit. In view of the misuse of research funds disclosed by the audit of grants to Public Service Research, Inc., *the committee believes it preferable that NIH limit its support for research projects originating with the investigator to nonprofit organizations, and extend such assistance to commercial organizations only in exceptional circumstances.*

### INDIRECT COSTS

As a general rule, the committee believes it undesirable that the Federal Government assume responsibility for the total cost of health research conducted in universities and other non-Federal institutions. It has long been the accepted principle in other Federal grant programs that the participating units of government or institutions pay a predetermined share of the cost in recognition of the cooperative nature of the program and as a means of assuring fiscal responsibility. The non-Federal agency or institution which receives Federal grants is likely to exercise greater care in spending program funds if it contributes a portion of the money.

The committee recognizes, however, that in certain instances projects and facilities may possess a special national character which justifies their being supported wholly by Federal funds. A research project or facility might be of this kind, for example, if it had no substantial relationship to the educational or regular research activities of an institution, or if the degree of scientific and administrative participation by the supporting Federal agency is larger than in the

normal grant project. The committee believes that the nature of the project should determine the extent of Federal financial participation in both the direct and the indirect costs. It is noteworthy that the Bureau of the Budget recently expressed a similar view.[14]

Some proponents of larger Federal indirect cost payments have suggested that the Government forces institutions to share indirect costs to the extent that the 15-percent overhead rate paid by NIH provides less than the full amount the institution could obtain under Budget Bureau Circular A–21. This contention ignores the essential question of whether or not all of the indirect cost items recognized by Circular A–21 are appropriate charges for grant-supported research on the same basis as for purchased research. Moreover, as the committee noted last year, it is ordinarily misleading to compare the 15-percent rate paid by NIH directly with the indirect cost rate determined for an institution under Circular A–21. These dissimilar rates are not comparable for two reasons: First, the NIH rate applies to the total direct costs of a project, while the Circular A–21 rate is usually paid only for the salary and wage portion of direct project costs. And, second, many institutions account for employee benefit expenses as an indirect cost in determining their overhead rates under Circular A–21, but charge these same items as a direct expense against NIH grants. This practice, allowable under NIH policy, not only increases the amount the institution obtains directly from the grant, but the indirect cost payment is also increased by the receipt of 15 percent on the additional items treated as direct expenses.

The committee favors the adoption of a uniform Government-wide policy for indirect costs which will take into account the nature of the research project and the benefits to the grantee institution. With respect to basic and other nondirected research supported by Federal agencies, the committee finds considerable merit in the concept of Government participation in indirect costs to the extent they are brought into existence or increased by such support. The Director of NIH has expressed agreement with this view.

*Until a uniform Federal policy is established and as long as NIH operates under a maximum indirect cost rate determined by the Congress, the committee recommends that NIH—*

*(1) Pay no more than the actual indirect cost rate for any institution having a lower rate than the maximum set by the Congress; and*

*(2) Prohibit the use of direct grant funds to defray employee benefit costs unless the usual accounting practices of the institution properly and consistently treat these costs as direct expenses.*

### NEED FOR A MORE POSITIVE GRANT PHILOSOPHY

The committee is concerned by reports of the widely held attitude of scientists toward NIH grants. It is apparent to the committee that many scientists regard their grants as personal resources and use surplus funds that remain after providing for necessary project expenses for nonessential purposes, rather than return surplus money to the Government. It is significant in this connection that supplemental

[14] "Report to the President on Government Contracting for Research and Development" (Apr. 30, 1962), pp. 39–40.

grants amounting to more than 5 percent of total project awards are made to investigators who underestimate their needs, while virtually no money is returned to the Government because grant needs are overestimated.

There is also a tendency for institutions to permit project grants to be spent less carefully than the institution's own funds. Since the grant is awarded for use under the direction of a particular investigator selected by NIH, the institution often tends to regard itself as only the "host" for the project and does not exercise the same degree of management responsibility as for the research which it sponsors.

The committee finds that the policy statements issued for the NIH grant programs do not adequately inform the scientist or his institution of the obligations which accompany the discretionary handling of public funds.

*The committee recommends, accordingly, that NIH formulate grant principles which will clarify the moral obligations of the scientist as a trustee of public funds. The committee recommends also that NIH develop administrative arrangments for obtaining greater responsibility on the part of grantee institutions for the prudent expenditure of project funds.*

### SOME FURTHER OBSERVATIONS

The committee agrees that the selection of good investigators and good projects is vital to productive scientific research, but the effective management of grants is also a fundamental responsibility of a Government agency charged with administering grant programs.

The committee takes strong exception to the view expressed by NIH that all administrative actions subsequent to the selection of grant projects are "essentially trivial" in relation to the basic selection process. The selection process and grant management are essential and complementary parts of NIH research support. Excellence is required of both.

While the committee has not attempted to evaluate the effectiveness of NIH's grant selection system, a few observations are pertinent here.

According to the NIH criteria for rating grant projects, the average quality of such projects has been steadily declining in recent years. The proportion of the best projects (the 100–199 group) has declined while there has been a corresponding increase in the proportion of supported projects in the lowest priority class (the 400–500 group). The latter has increased from 1 percent in 1956 to 3.8 percent of the total in November 1961.

It is probable that the large annual increases in the NIH appropriation made in the past several years has contributed to the increasing support of lower quality research. The committee is aware that all projects supported by NIH have been found by consultants to possess scientific merit. The main question raised by this development, however, is whether or not it is sound public policy and in the best interest of science that every project found technically sound and approvable by NIH's outside consultants receive support, regardless of its relative quality. A related matter is the need for NIH to increase the capability of its own professional staff for determining whether the projects recommended by the scientific consultants should be supported

in the light of broader policy considerations. *The committee urges that NIH give critical attention to these matters.*

It appears that the Congress has been overzealous in appropriating money for health research. The conclusion is inescapable, from a study of NIH's loose administrative practices, that the pressure for spending increasingly large appropriations has kept NIH from giving adequate attention to basic management problems. *The committee expects NIH to give high priority at this time to the task of correcting its management deficiencies and strengthening its capacity for the effective and efficient operation of these vital health programs.*

# APPENDIXES

## APPENDIX 1.—CORRESPONDENCE AND PROGRESS REPORTS

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
NATIONAL INSTITUTES OF HEALTH,
*Bethesda, Md., April 25, 1961.*

Hon. L. H. FOUNTAIN,
*Chairman, Intergovernmental Relations Subcommittee, Committee on Government Operations, House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: It was considerate of you to give me an opportunity to review the very thorough report by the Intergovernmental Relations Subcommittee of the Committee on Government Operations, entitled "The Support of Extramural Research and Training by the National Institutes of Health."

I should like to express my sincere appreciation for the opportunity to offer comment on this excellent report. While most of the recommendations would be entirely acceptable to the National Institutes of Health, there are several on which I should like to make statements:

1. The subcommittee recommends that study section review be complemented by a thorough review of each project's financial requirements to be performed by qualified analysts of the Division of Research Grants. While this recommendation is sound, I believe that a modification would effect both the systematic budget examination desired and significant economy in the cost of review. The modification would be that study sections and councils review applications and establish approximate levels of support subject to annual staff negotiation of the precise amounts to be awarded. Such a change in procedure would meet the objections of the subcommittee and would decrease the number of applications subjected to review, particularly since under such a plan of operations study sections and councils would feel more comfortable in awarding longer term support—now averaging only 3 years. Staff members could, where necessary, draft expert consultants to assist in the review of program accomplishments and financial needs.

2. The subcommittee recommends that special advisory committees be organized for review of "general support" programs. The NIH has just established such committees in the Division of Research Grants. These committees will review projects which cannot appropriately be reviewed by the study sections and will include fiscal and



H. Rept. 1958, 87-2——5

management analysts, as well as expert scientists. These new committees will review applications for the next round of council meetings.

3. The subcommittee recommends that grants for projects initiated by commercial firms be placed on a cost-sharing basis. The NIH would not take exception to this recommendation but does believe that further study should be made as to the comparable advantages and disadvantages of the grant and contract in awarding support to commercial firms. Negotiated contracts would prevent the abuses described.

4. The subcommittee recommends that special developmental-type grants be made as a means of stimulating research in universities and professional schools which have training responsibilities in scientific fields relating to health but which have little health research activity. The NIH believes that the institutional grant, when fully implemented, will serve the purpose indicated. When criteria were originally developed for the establishment of this program, it was considered desirable to include funds for developmental-type programs in the determination of the total amount of the grant to be awarded. This particular criterion was tabled, however, until the institutional grant program could be evaluated after a year or more of operation. The NIH would therefore prefer to wait for that period of time in order to decide whether modification of the institutional grant would be the preferable way to provide for special developmental-type support.

5. The subcommittee recommends that the Congress authorize the PHS to award research grants to scientists in Veterans' Administration hospitals. The NIH strongly believes that the current procedure should not be extended. Only those VA employees who have bona fide affiliations with medical schools are presently eligible to apply for support. It is believed that the employees of VA hospitals should look to the VA for their research support and that the VA can better accomplish its own research objectives if it makes the determination as to which scientists and what research should be supported. In view of the findings of the subcommittee, the NIH would not object to the termination of the present agreement provided the VA could receive the necessary increase in appropriations to permit continuation of the projects currently supported by the NIH.

6. The subcommittee recommends that the NIH reexamine its policy of making indirect costs payments on renovations and major equipment expenditures from clinical research facility grants. The NIH is certainly willing to reexamine its policy but tentatively concludes that a simple modification of this recommendation would be preferable. The modification would disallow indirect costs on any renovation for which contract is issued. It is believed that any renovation completed by regular institution staff and all equipment in amounts up to $2,500 should be a part of the direct costs for which indirect costs are allowed.

Sincerely yours,

JAMES A. SHANNON, *Director.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
*Washington, D.C., May 12, 1961.*

Hon. L. H. FOUNTAIN,
*Chairman, Intergovernmental Relations Subcommittee,*
*Committee on Government Operations,*
*House Office Building, Washington, D.C.*

DEAR MR. FOUNTAIN: Thank you for your letter of May 1 and the copy which you enclosed of the report on the health and research training programs administered by the National Institutes of Health.

You will note from the enclosed statement that I feel your study and report have rendered a service to the national research effort.

I have asked the staff of the National Institutes of Health to work with my immediate staff in preparing a comment on the specific recommendations in the report. I shall be happy to forward it to you as soon as it is completed.

With all good wishes.

Sincerely yours,

LUTHER L. TERRY, *Surgeon General.*

(The press statement dated May 2, 1961, referred to in the Surgeon General's letters follows:)

Dr. Luther L. Terry, Surgeon General of the Public Health Service, today issued the following statement concerning the report of the House Committee on Government Operations which dealt with the administration of grants and awards by the National Institutes of Health:

"The House Committee on Government Operations, through its study and report on the research and training programs of the National Institutes of Health, has rendered a service to the national research effort by suggesting measures for strengthening administration. This report comes at an opportune time as the National Institutes of Health moves rapidly into the administration of larger and more complex programs of medical research and training directed by the Congress over the past 3 years.

"The report of the committee has pointed out some procedural measures that will be very seriously considered in the interest of economical and businesslike administration. However, in working out these measures, care must be taken that they do not adversely affect the attainment of the essential purpose of the programs—the production of research findings contributing to the conquest of disease."

Dr. Terry said that the National Institutes of Health has analyzed the committee's several recommendations and provided him with the following summary:

The recommendations applicable to NIH fall generally into four categories:

1. *Recommendations already acted upon by the National Institutes of Health.*—These cover recommendations that NIH establish special advisory groups for financial and administrative review of the grants and training projects and the development of better procedures for avoiding undesirable duplication of project support.

2. *Recommendations which NIH is now placing in effect.*—These include measures for more thorough review of long-term budgetary needs of proposed research grants; initiation of special grants to develop the research potentials of institutions now having limited research programs; more consistent NIH policies and procedures for the training grant programs.

3. *Recommendations which NIH has not acted upon but will give serious consideration.*—These cover development of a cost-sharing approach to research grants made to commercial firms; separate policies for grants to support scientific meetings; reexamination of policies for allowing indirect costs for large grants for research which does not involve any considerable indirect cost expenditure by the grantee institution.

4. *Recommendaton which NIH would prefer not to adopt.*—This recommendation was to the effect that NIH should make direct research grants to Veterans' Administration hospitals. NIH believes the VA can better accomplish its research objectives if it makes its own determination as to which scientists and research should be supported, and that this support should come from VA funds.

Dr. Terry said that the Public Health Service concurred in this recommendation. He said that the report included a few recommendations that concerned other agencies of the Federal Government. This group of recommendations deals in particular with uniform salary scales to be paid from Federal grants, new methods of computing indirect costs of research grant projects, and the impact of research and research training grants upon the teaching function of universities and medical schools. The Public Health Service is ready to cooperate fully with all groups concerned with these questions in an effort to find effective solutions, the Surgeon General said.

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
*Washington, D.C.*

Hon. L. H. FOUNTAIN,
*Chairman, Intergovernmental Relations Subcommittee, Committee on Government Operations, House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: In my letter of May 12 commending your report, "Health Research and Training: Administration of Grants and Awards by the National Institutes of Health," I advised that a more detailed report of progress would be forthcoming from the National Institutes of Health. It gives me real pleasure to transmit to you this interim report which describes the current status of actions taken by the NIH with respect to each of the recommendations contained in your report. Again, may I compliment you upon a searching and constructive inquiry into the growing and complex set of activities administered by the National Institutes of Health. I am confident that many of the committee recommendations will be adopted more easily by reason of your independent recognition of their significance.

Study of the matters set forth in your report continues at the National Institutes of Health. I shall keep you informed of further

major developments in connection with the recommendations contained in the report of your committee.

I should also add that the present interim report has been only hastily reviewed by this office and has not yet been reviewed at all by the Department. We are forwarding the report in order to meet your committee's deadline. If there should be further comments from this office or from the Department, they will be forwarded in due course.

Sincerely yours,

LUTHER. L. TERRY, *Surgeon General.*

JUNE 15, 1961.

SUMMARY OF NIH ACTIONS AND ATTITUDES WITH RESPECT TO THE RECOMMENDATIONS CONTAINED IN THE REPORT, "HEALTH RESEARCH AND TRAINING—THE ADMINISTRATION OF GRANTS AND AWARDS BY THE NATIONAL INSTITUTES OF HEALTH"

(A second report by the Committee on Government Operations, House of Representatives, April 28, 1961)

This summary is an interim report of the current status of actions and the nature of present viewpoints taken by the National Institutes of Health concerning each of the recommendations contained in the Fountain committee report:

*Recommendation No. 1.*—Additional measures be taken to improve the effectiveness of the present project review system:

First: The scientific review conducted by the study sections should be complemented by a thorough review of each project's financial requirements performed by qualified analysts in the Division of Research Grants.

Second: NIH should consider the feasibility of forming field review teams composed of staff representatives to visit grantee institutions on a regular basis, perhaps once a year.

Third: NIH should determine the dollar amount of support. for projects receiving grant commitments for extended periods of time, at frequent intervals and on the basis of an adequate review of program accomplishment, potential, and financial needs.

Fourth: Special advisory committees should be organized to review grants which are intended to provide general support for whole programs or divisions of institutions.

*Action.*—NIH is in the process of implementing these recommendations by strengthening its procedures and staff for more thorough examination of the budgets of research proposals. Under these revised procedures, study sections and councils will review applications and establish approximate levels of future support subject to annual staff negotiations of the precise amounts to be awarded. These procedures will also insure closer scrutiny of equipment requirements in order to determine the essentiality of proposed equipment purchases, particularly when similar equipment has been provided under earlier grants. This budgetary review procedure will also facilitate continuing contact with grantees through determination at frequent intervals of the dollar amount of support required for projects receiving long-term support.

Most important, this improvement in the review of budgetary requirements of research projects will enable study sections and councils to act with greater confidence in awarding longer term support when they know that the details of the budget will be subjected to annual staff review and negotiation. At the same time, it goes without saying that enlargement of the review process will substantially increase administrative costs; it will also insure greater accountability and prudence in the use of grant funds.

With respect to the specific recommendation concerning field review teams, NIH has a task force at work exploring the feasibility of this proposal. This task force is charged with recommending the most appropriate ways and means to accomplish this objective in a manner that will sustain the quality of review, be sensitive to Institute statutory responsibilities and missions, and establish optimum rapport with institutions and investigators. At this stage, the use of field review teams seems a desirable course of action. A more definitive evaluation must await the considered appraisal of the task force.

With regard to the fourth element of this recommendation NIH has already established special advisory groups for grants providing support for whole programs or divisions of institutions. This action was taken because, as noted by the committee, "large grants of this kind are not for projects in the conventional sense and, consequently, require a special type of review by a competent body." Review of applications for such program project support involves considerations of institutional organization, complex problems of administration, and other features not present in the regular project grant. NIH has long utilized special review procedures for such grants. These procedures are now being formalized. This formalization will include the issuance of new procedures for the guidance of applicants and for review of such applications.

*Recommendation No. 2.*—Grants for projects initiated by commercial firms be placed on a cost-sharing basis.

The committee believes this action, together with implementation of its recommendations for strengthening the review of projects and the management of grants, will place grants to commercial firms on a sounder foundation.

*Action.*—A task force is examining, carefully and critically, the comparative advantages and disadvantages of alternative grant and contract mechanisms in providing support for investigators located in commercial firms. NIH has taken the tentative position that negotiated contracts may represent the more prudent course of action. Final action necessarily has been deferred pending completion of the task force's review of the pros and cons of the alternative methods for supporting research in commercial firms.

*Recommendation No. 3.*—NIH develop a separate policy governing the purpose and use of, and the eligibility conditions for, grants to help support national and international meetings of recognized scientific organizations.

*Action.*—NIH agrees with the recommendation that "policies and procedures designed for support of scientific investigation should not be applied to conference grants." Careful review has confirmed the soundness of NIH current policies in this regard, with two significant exceptions. A revised statement of policy and procedures under

which NIH grant funds may be used for the support of scientific meetings will be published shortly. This revised policy specifically prohibits the use of grant funds for (1) indirect costs or (2) honoraria in connection with such meetings.

*Recommendation No. 4.*—NIH seek to further improve its methods for coordinating research activities with other Government and private agencies so as to minimize unnecessary or unintended duplication of research in the health field.

*Action.*—The report notes, "NIH has developed workable arrangements for avoiding undesirable duplication of project support." NIH has taken additional steps to further improve the information exchange system with other Federal agencies. Data on NIH intramural research projects are now being made available to the Science Information Exchange. In this connection, it should also be noted that NIH helped found, and has long been a strong supporter of, the Science Information Exchange (formerly the Biosciences Information Exchange), and we attempt to utilize these facilities to the maximum. Continued attention is being given to means for improving coordination and facilitating communication among Federal agencies engaged in biomedical research.

*Recommendation No. 5.*—The President establish a uniform policy with respect to acceptable salary practices in the use of Federal research funds applicable to all Federal agencies making grants to educational and other research institutions.

*Action.*—NIH heartily endorses this recommendation and advocates the establishment of an interagency committee under the aegis of the Federal Council on Science and Technology or a special group under the President's Science Advisory Committee to study the problem in its total setting and to recommend uniform policies to be utilized by national agencies for the President's consideration.

*Recommendation No. 6.*—NIH initiate for a limited time a special developmental-type grant as a direct means of stimulating research capability in those universities and professional schools which have training responsibilities in scientific fields related to health, but are not actively engaged in health research.

*Action.*—There are few, if any, major universities in the United States not now participating in NIH programs. Between 1957 and 1960 the number of colleges and universities receiving research grants through NIH grew from 209 to 293—an increase of 40 percent. The distribution of research grant awards to colleges and universities has steadily broadened over the past decade. With respect to the few institutions not now participating in the NIH research program, the Fountain committee report indicates that the so-called limited participation is "due more to the paucity of project applications than to the high disapproval rate of proposals." While this observation applies generally to academic institutions as a whole, NIH is keenly sensitive to the need for developing research potential in health professional schools such as veterinary medicine, pharmacy, nursing, and social work. The NIH believes that the institutional grant, when fully implemented, will in large measure serve the purpose sought by the committee.

With respect to the larger issue raised by the committee's recommendation, it should be emphasized that scientific merit—the criterion

of excellence—governs today's decisions to support university research. This criterion assures support for the brilliant, young innovators as well as the mature investigators. Diversion of research funds from the talented to the mediocre would be a poor investment of public moneys both in the short run and over the long haul. No Federal agency now has a clear statutory role either to facilitate the upgrading of weaker institutions or to foster the creation of brandnew universities. This may be a serious gap in national policy.

*Recommendation No. 7.*—The Congress consider action to permit the awarding of research project grants under the Public Health Service Act to VA hospitals on the same terms and conditions as apply to non-Federal institutions.

*Action.*—At this time only those VA employees who have bona fide affiliations with medical schools are eligible to apply for such support through university sponsorship as a staff member.

In the submission of the President's budget to the Congress the administration indicated the desirability of providing a legal base to permit NIH research grants to be made to all VA investigators under the general review and award procedure. If the Congress concurs in the administration's proposal to extend its current procedures to enable all VA scientists, irrespective of medical school affiliation, to compete for research support, NIH is prepared to implement necessary procedures immediately.

*Recommendation No. 8.*—The Director of NIH review the training policies and procedures of the Institutes and the Division of General Medical Sciences for the purpose of obtaining a greater degree of uniformity and simplification.

*Action.*—Studies of various aspects of NIH training policies and procedures of the nature recommended by the committee have been in process for 2 years, and extensive changes have been made in these programs. Substantial gains in the direction of uniformity and simplicity have been possible in the past year. The remaining differences in policies and practice may, in the words of the committee report, "be necessary in view of the individualized nature of NIH training programs." However, this is a complex area of activity that is under constant surveillance.

NIH has taken prompt and effective action to develop training programs to meet research training needs. The level of training expenditures has grown from $33 million in 1957 to $132 million in 1961—a fourfold increase. The emphasis in this process has been upon action and results, perhaps somewhat to the detriment of ideal coordination. Administratively, the position has been taken to restrain the rate of growth momentarily so that NIH may consolidate more effectively the management of these programs.

*Recommendation No. 9.*—The Secretary of Health, Education, and Welfare carefully examine the existing programs and administrative arrangements for special-purpose training in the health field both in terms of overall Federal objectives in support of education and the impact of these programs on our educational institutions.

*Action.*—This recommendation is addressed to the Secretary; it would be inappropriate for NIH to respond in advance of a departmental position.

*Recommendation No. 10.*—The appropriate executive agencies and committees of the Congress give particular attention to the problem of attracting outstanding students to the field of medicine.

*Action.*—The scope of this recommendation exceeds existing NIH authority. However, itis believed that fellowships for medical students such as is provided for in legislation recommended by the administration and now before the Congress would substantially expand the opportunity for qualified youth to seek careers in medicine.

*Recommendation No. 11.*—Each participating institution be given the option of using either of two methods for computing the overhead allowance on supported research.

One method would be the continued use of a flat rate adjusted periodically to equal approximately 50 percent of the average rate of indirect expenses based on total direct costs for all grantee institutions as a group, as measured by appropriate cost accounting principles and procedures. In lieu of the standard rate, and in order to provide equitable treatment for those institutions possessing relatively high overhead costs, an institution would be allowed 50 percent of its actual indirect cost rate determined in the same manner as above.

*Action.*—The problem of indirect cost has received a great deal of attention by the executive branch, the Congress, and the universities. The National Science Foundation is currently conducting a comprehensive study to determine more accurately the various components of indirect and direct cost. It is the view of the National Institutes of Health that substantial cost-sharing as recommended by the Fountain committee may seriously restrict the ability of topflight investigators and institutions to participate in NIH programs. Irrespective of philosophy, the decision rests with the Congress which has for 4 years restricted NIH to a 15-percent allowance for indirect costs.

*Recommendation No. 12.*—No overhead be allowed on grants or grant items which do not entail actual indirect expenses, and an amount less than the regular rate be allowed when extramural research requires few institutional services.

*Recommendation No. 13.*—NIH reexamine its policy of making indirect cost payments on renovation and major equipment expenditures from grants for the establishment of clinical research facilities.

*Action.*—NIH concurs, in general, with the soundness of committee recommendations Nos. 12 and 13. In the past, NIH has not excluded specific direct cost items within a grant from the computation of overhead in view of the general congressional limitation on the 15-percent maximum indirect cost rate—a rate which results in less than full indirect costs for essentially all grantee institutions. However, the recent growth of program and center projects has pointed up the need for more explicit guidance on items such as those referred to in the recommendations. Accordingly, procedures are now being revised to exclude items such as rental and renovation from the indirect cost computation base.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
*Washington, D.C., July 26, 1961.*

Hon. L. H. FOUNTAIN,
*Chairman, Subcommittee on Intergovernmental Relations,*
*Committee on Government Operations,*
*House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: In preparation for the hearings scheduled for August 1 and 2 on "Health Research and Training: Administration of Grants and Awards by the National Institutes of Health," the attached statement has been prepared to show action to date on the several recommendations for which the National Institutes of Health has direct responsibility. This statement gives somewhat greater detail than that shown in the summary provided under date of June 15, 1961.

We shall be pleased to answer any questions you or the committee members may have either at the scheduled hearings or otherwise.

Sincerely yours,

LUTHER L. TERRY,
*Surgeon General.*

JULY 25, 1961.

SUMMARY OF NIH ACTIONS AND ATTITUDES WITH RESPECT TO THE RECOMMENDATIONS CONTAINED IN THE REPORT "HEALTH RESEARCH AND TRAINING—THE ADMINISTRATION OF GRANTS AND AWARDS BY THE NATIONAL INSTITUTES OF HEALTH"

(A second report by the Committee on Government Operations, House of Representatives, April 28, 1961)

This summary is a report of position and action taken to date by the National Institutes of Health on the various recommendations contained in the Fountain committee report.

*Recommendation No. 1.*—Additional measures be taken to improve the effectiveness of the present project review system:

First: The scientific review conducted by the study sections should be complemented by a thorough review of each project's financial requirements performed by qualified analysts in the Division of Research Grants.

Second: NIH should consider the feasibility of forming field review teams composed of staff representatives to visit grantee institutions on a regular basis, perhaps once a year.

Third: NIH should determine the dollar amount of support, for projects receiving grant commitments for extended periods of time, at frequent intervals and on the basis of an adequate review of program accomplishment, potential, and financial needs.

Fourth: Special advisory committees should be organized to review grants which are intended to provide general support for whole programs or divisions of institutions.

*Action.*—NIH is in the process of implementing these recommendations by strengthening its procedures and staff for more thorough examination of the budgets of research proposals. Under these revised procedures, study sections and councils will review applications and establish ceilings for future support subject to annual staff nego-

tiations of the precise amounts to be awarded. These procedures will insure closer scrutiny of equipment requirements in order to determine the essentiality of proposed equipment purchases, particularly when similar equipment has been provided under earlier grants. This budgetary review procedure will also facilitate continuing contact with grantees through determination at frequent intervals of the dollar amount of support required for projects receiving long-term support.

Specifically, a revised application form to be used by investigators in requesting previously recommended years of research grant support (PHS Form 2590) has been prepared. This form, and the accompanying instructions, require each PHS grantee to provide a substantially more detailed exposition and justification of each year's research budget than has hitherto been required. The grantee is now being requested to explain any significant change in the proposed use of funds as compared with expenditures during the current-year grant. Changes in the investigator's plans for the purchase of equipment will be detailed in order that an appropriate evaluation of these requirements can be made.

This improvement in the review of budgetary requirements of research projects will enable study sections and councils to act with greater confidence in awarding longer term support when they know that the details of the budget will be subjected to annual staff review and negotiation. This enlargement of the review process will of course substantially increase administrative costs.

Consideration has been given to maintaining detailed records of all equipment purchased on PHS grants in order to assess the need for new equipment in each department of every grantee institution. Firm conclusion has been reached however, that the adoption of such procedure would be impractical and potentially very damaging to the grant program. To accomplish such an end would require continuous Federal surveillance of the condition of each piece of major equipment in hundreds of private and State universities and hospitals; the frequency of its use by thousands of research workers in the department and related departments; and the availability, condition, and use of the many accessory units which frequently determine the suitability of a complex instrument for a particular research requirement.

The National Institutes of Health has a task force at work exploring the feasibility of using field review teams. This task force is charged with recommending the most appropriate ways and means of using field review teams in a manner that will sustain the quality of review, be sensitive to institute statutory responsibilities and missions, and establish optimum rapport with institutions and investigators. A definitive evaluation must await the considered appraisal of the task force.

With regard to the fourth element of this recommendation, NIH has already established special advisory groups for larger grants which provide support for whole programs of institutions. This action was taken because, as noted by the committee, "large grants of this kind are not for projects in the conventional sense, and consequently, require a special type of review by a competent body." Review of applications for such program project support involves considerations of institutional organization, complex problems of administration, and other features not present in the regular project grant.

The National Institutes of Health has already completed the establishment of seven such special review panels, with two more to be added shortly, organized with these objectives in mind. In addition to scientific competence, the membership of the committees includes individuals expert in medical administration, research organization, hospital business management, and research cost accounting. These panels, and additional ones to be added as required, will be administered by the new Special Programs Review Branch in the Division of Research Grants, and will commence meetings during the fall of 1961. All applications for program support will continue to receive a second review by the appropriate national advisory council.

A supplemental policy statement has been prepared and disseminated clarifying the objectives and conditions surrounding the award of grants for the support of major programs of research.

*Recommendation No. 2.*—Grants for projects initiated by commercial firms be placed on a cost-sharing basis.

The committee believes this action, together with implementation of its recommendations for strengthening the review of projects and the management of grants, will place grants to commercial firms on a sounder foundation.

*Action.*—A task force has examined the comparative advantages and disadvantages of various grant and contract mechanisms for providing support of investigators located in commercial firms. The tentative conclusion has been reached that negotiated contracts represent the preferable mechanism for such research support. This group is now exploring the feasibility of negotiating contracts with the commercial firms which now have grants from NIH. This involves review of the type of work now being supported and assessment of the general terms and conditions most suitable for such contractual relationships.

*Recommendation No. 3.*—NIH develop a separate policy governing the purpose and use of, and the eligibility conditions for, grants to help support national and international meetings of recognized scientific organizations.

*Action.*—NIH agrees with the recommendation that "policies and procedures designed for support of scientific investigation should not be applied to conference grants." A revised statement of policy and procedures under which NIH grant funds may be used for the support of scientific meetings has been released. This revised policy specifically prohibits the use of grant funds for (1) indirect costs, (2) honoraria in connection with such meetings, and (3) purchase of equipment. It also provides for much more detailed breakdown of proposed expenditures and forbids the transfer of funds from one category of expense to another without PHS approval.

*Recommendation No. 4.*—NIH seek to further improve its methods for coordinating research activities with other Government and private agencies so as to minimize unnecessary or unintended duplication of research in the health field.

*Action.*—The report notes, "NIH has developed workable arrangements for avoiding undesirable duplication of project support." NIH has taken additional steps to improve the information exchange system with other Federal agencies. Data on NIH intramural research projects are now being made available to the Science Information

Exchange. In this connection, it should also be noted that NIH helped found, and has long been a strong supporter of, the Science Information Exchange (formerly the Bio-Sciences Information Exchange), and we attempt to utilize these facilities to the maximum. Continued attention is being given to means for improving coordination and facilities communication among Federal agencies engaged in biomedical research.

*Recommendation No. 5.*—The President establish a uniform policy with respect to acceptable salary practices in the use of Federal research funds applicable to all Federal agencies making grants to educational and other research institutions.

*Action.*—The NIH heartily endorses this recommendation and advocates the establishment of an interagency committee under the aegis of the Federal Council on Science and Technology or a special group under the President's Science Advisory Committee to study the problem in its total setting and to recommend uniform policies to be utilized by national agencies for the President's consideration.

*Recommendation No. 6.*—NIH initiate for a limited time a special developmental-type grant as a direct means of stimulating research capability in those universities and professional schools which have training responsibilities in scientific fields related to health, but are not actively engaged in health research.

*Action.*—The number of universities receiving NIH grant support is growing steadily. Between 1957 and 1960 the number of colleges and universities receiving research grants through NIH grew from 209 to 293—an increase of 40 percent. The number of institutions receiving support grew in the same period from 572 to 973, an increase of 70 percent.

With respect to the few institutions not now participating in the NIH research program, the Fountain committee report indicates that the so-called limited participation is "due more to the paucity of project applications than to the high disapproval rate of proposals." While this observation applies generally to academic institutions as a whole, NIH is keenly sensitive to the need for developing research potential in health professional schools such as veterinary medicine, pharmacy, nursing, and social work. The NIH believes that the general research support grant, when fully implemented, will in large measure serve the purpose sought by the committee.

With respect to the larger issue raised by the committee's recommendation, it should be emphasized that scientific merit—the criterion of excellence—governs today's decisions to support research. This criterion assures support for the brilliant, young innovators as well as the mature investigators. Diversion of research funds from the talented to the mediocre would be a poor investment of public moneys both in the short run and over the long haul. No Federal agency now has a clear statutory role either to facilitate the upgrading of weaker institutions or to foster the creation of new universities. This may be a serious gap in national policy.

*Recommendation No. 7.*—The Congress consider action to permit the awarding of research project grants under the Public Health Service Act to VA hospitals on the same terms and conditions as apply to non-Federal institutions.

*Action.*—When originally negotiated the memorandum of agreement between the National Institutes of Health, Public Health Service, and the Veterans' Administration intended that only those Veterans' Administration employees with bona fide affiliations with medical schools (usually a joint appointment) would be eligible to apply for NIH research grant support. The procedure necessarily called for submission of the application by the medical school since the PHS had no authority to make grants to a hospital of the Veterans' Administration. The report by the Committee on Government Operations points out that the procedure has been liberalized through interpretation to include any employees in a Veterans' Administration hospital which has a formal affiliation with a medical school. This liberalization has been accepted by the NIH in view of the close working relationships of such VA hospitals with the medical schools, our understanding being that the selection of VA staff in such hospitals is subject to the dean's committee approval and that the VA hospital becomes a part of the medical school complex.

In the submission of the President's budget to the Congress the administration indicated the desirability of providing a legal base to permit NIH research grants to be made to all VA investigators under the general review and award procedure. If the Congress concurs in the administration's proposal to extend its current procedures to enable all VA scientists, irrespective of medical school affiliation, to compete for research support, NIH will implement necessary procedures just so soon as legal authority is provided.

*Recommendation No. 8.*—The Director of NIH review the training policies and procedures of the Institutes and the Division of General Medical Sciences for the purpose of obtaining a greater degree of uniformity and simplification.

*Action.*—Studies of various aspects of NIH training policies and procedures of the nature recommended by the committee have been in process for 2 years, and extensive changes have been made in these programs. Substantial gains in the direction of uniformity and simplicity have been possible in the past year.

Examples of gains in uniformity which have recently been accomplished include (1) establishment of a central office and mechanism for receipt and referral of all training grant applications in the Division of Research Grants, (2) adoption of a common appointment form (2271), and (3) procedure to provide for DRG editing and coding for informational purposes of all trainee appointment notifications submitted by all training grant program directors.

Policies acceptable uniformly to all Institutes have been developed in regard to (1) indirect cost payments on stipends, (2) payment of tuition and fees, (3) carryover to succeeding year of unexpended funds, and (4) a common forward financing procedure.

There remain several differences in policies and practices among the several Institutes in regard to training grants which may in the word of the committee report "be necessary in view of the individualized nature of NIH training programs." These are complex areas of activity that will be kept under constant surveillance.

*Recommendation No. 9.*—The Secretary of Health, Education, and Welfare carefully examine the existing programs and administrative arrangements for special-purpose training in the health field both in

terms of overall Federal objectives in support of education and the impact of these programs on our educational institutions.

*Action.*—This recommendation is addressed to the Secretary. The NIH will be guided by action taken by that office.

*Recommendation No. 10.*—The appropriate executive agencies and committees of the Congress give particular attention to the problem of attracting outstanding students to the field of medicine.

*Action.*—The scope of this recommendation exceeds existing NIH authority; however, it is believed that fellowships for medical students such as is provided for in legislation recommended by the administration and now before the Congress would substantially expand the opportunity for qualified youth to seek careers in medicine.

*Recommendation No. 11.*—Each participating institution be given the option of using either of two methods for computing the overhead allowance on supported research.

One method would be the continued use of a flat rate adjusted periodically to equal approximately 50 percent of the average rate of indirect expenses based on total direct costs for all grantee institutions as a group, as measured by appropriate cost accounting principles and procedures. In lieu of the standard rate, and in order to provide equitable treatment for those institutions possessing relatively high overhead costs, an institution would be allowed 50 percent of its actual indirect cost rate determined in the same manner as above.

*Action.*—The problem of indirect cost has received a great deal of attention by the executive branch, the Congress, and the universities. The National Science Foundation is currently conducting a comprehensive study to determine more accurately the various components of indirect and direct cost. It is the view of the National Institutes of Health that substantial cost-sharing as recommended by the Fountain committee may seriously restrict the ability of top-flight investigators and institutions to participate in NIH programs. Irrespective of philosophy, the decision rests with the Congress which has for 4 years restricted NIH to a 15-percent allowance for indirect costs notwithstanding the recommendation of the Department of Health, Education, and Welfare that this restriction be removed.

*Recommendation No. 12.*—No overhead be allowed on grants or grant items which do not entail actual indirect expenses, and an amount less than the regular rate be allowed when extramural research requires few institutional services.

*Recommendation No. 13.*—NIH reexamine its policy of making indirect cost payments on renovation and major equipment expenditures from grants for the establishment of clinical research facilities.

*Action.*—The NIH concurs with the soundness of committee recommendations No. 12 and 13. In the past, NIH has not excluded specific direct cost items from the computation of overhead since the 15-percent rate has resulted in less than full indirect costs for essentially all grantee institutions. The recent growth of program and center projects has pointed up the need to single out these items for special attention. Accordingly, procedures have been revised to exclude indirect costs on items such as (1) alteration and renovation, (2) fixed equipment that becomes part of real property, (3) rental equipment, and (4) conferences and symposia. Previous procedure will be continued to exclude indirect costs on research bed costs and on any part

of the cost of equipment in excess of $2,500. Indirect costs will be negotiated on rentals and on such grants as those to medical schools in behalf of Veterans' Administration employees.

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
NATIONAL INSTITUTES OF HEALTH,
*Bethesda, Md., January 22, 1962.*

Hon. L. H. FOUNTAIN,
*Chairman, Intergovernmental Relations Subcommittee,*
*Committee on Government Operations, House of Representatives,*
*Washington, D.C.*

DEAR MR. CHAIRMAN: In Dr. Shannon's absence from the National Institutes of Health on an extended field trip, I am pleased to reply to your letter of January 15, 1962, and to comply with your request for detailed description of what the National Institutes of Health has done toward carrying out each of the recommendations of the Committee on Government Operations, issued as House Report No. 321.

I note your request for information on further development of our statistical reporting and analysis facilities. In addition to commenting on each of the formal recommendations, I am therefore adding a special statement on statistical reporting and analysis.

We are in accord with the recommendations of your committee and definitely intend eventually to make all desirable changes needed to effect the sounder administration which your committee recommended.

Sincerely yours,

DAVID E. PRICE, M.D.,
*Acting Director.*

JANUARY 22, 1962.

A SECOND PROGRESS REPORT BY THE NATIONAL INSTITUTES OF HEALTH ON ACTION TAKEN WITH RESPECT TO THE RECOMMENDATIONS CONTAINED IN THE REPORT, "HEALTH RESEARCH AND TRAINING—THE ADMINISTRATION OF GRANTS AND AWARDS BY THE NATIONAL INSTITUTES OF HEALTH"

(A second report by the Committee on Government Operations, House of Representatives, April 28, 1961)

This report is a second progress report by the National Institutes of Health of action taken to date on the various recommendations contained in the Fountain committee report. There is also included a statement on progress by the National Institutes of Health in the development of its statistical and analysis facilities.

*Recommendation No. 1.*—Additional measures to be taken to improve the effectiveness of the present project review system:

(*a*) Procedures and staff for more thorough examination of the budgets of research proposals have been strengthened. Discussions have been held with study sections and councils concerning the need for more thorough review of budgets including future requirements

and requests for equipment. Future support of grants awarded for periods longer than 1 year is now understood to be "ceilings under which annual staff negotiations of the precise amounts to be awarded may be made." The application form has been modified and is now in use. It requires each Public Health Service grantee to provide a substantially more detailed exposition and justification of each year's research budget than has hitherto been required. The grantee is now requested to explain any significant change in the proposed use of funds as compared with expenditures during the current-year grant. Changes in the investigator's plans for the purchase of equipment are detailed and an appropriate evaluation of these requirements is made. Further, the budget is now subject to annual staff review and negotiation.

A procedure has been designed to enable NIH staff to keep abreast of equipment levels at institutions receiving PHS grants and to evaluate requests for equipment. All movable equipment purchased with PHS grant funds is reported annually to the NIH by means of regular expenditure reports. It is contemplated that the data from these reports will be captured centrally by machine operation, stored indefinitely, and subsequently retrieved as needed for use by study sections, councils, or staff. Different obsolescence factors will apply to different situations, needs, and items of equipment. While a 3- to 5-year obsolescence factor would generally be reasonable, the attendant circumstances at the time of review will dictate the precise obsolescence factor. Prior to making an award, the staff of the appropriate National Institute or division will examine the equipment requested in the budget and follow up on duplications not adequately justified. From time to time the equipment data stored will be retrieved for comparison with equipment described in applications and for a check on the effectiveness of the questions in the revised application form. This particular procedure cannot be implemented until space and necessary equipment can be obtained.

(*b*) We have considered further the feasibility of decentralizing our grants management function by forming field review teams composed of staff representatives, but are not prepared as yet to implement such a plan. Instead, as a means of improving our surveillance of the handling of our grants by the recipient institutions, we are planning to decentralize our currently centralized Grants Management Branch to the several Institutes and Divisions concerned with the awarding and programing of grant funds and thereby to involve an additional number of staff in management business. In the process of decentralizing, however, the Division of Research Grants will continue to accept coordinating responsibility.

(*c*) Special advisory committees have been organized and are functioning to review grants which are intended to provide support for broadly based and long-term programs of research activity. A Special Programs Review Branch is now part of the Division of Research Grants. It includes a series of advisory committees organized in such manner as to provide review of applications for grants for research program projects and research center projects in terms of the program interests of the various Institutes and Divisions of the NIH. These panels consist of experts in the various disciplines and specialties which, as a composite, cover the broad purview of one of the Insti-

tutes or Divisions. Thus, for example, there is an Arthritis and Metabolic Disease Program Project Committee, a Neurology and Blindness Program Project Committee, etc. Included among the consultants to these committees are experts in various fields representing considerations peculiar to these broader forms of support such as research cost accounting, hospital management and administration, medical care, institutional organization, and other features not present in the regular project grant.

*Recommendation No. 2.*—Grants for projects initiated by commercial firms be placed on a cost-sharing basis.

A special task force has further explored the feasibility of negotiating contracts with commercial firms, as well as other methods of supporting projects initiated by commercial firms, with conclusion reached that profitmaking institutions should still be eligible to receive research grant awards (as well as contracts) but that the grants should be subject to certain terms and conditions that may not be changed by the grantee without prior PHS approval. These terms modifying certain sections of the policy and information statement on research grants are as follows:

(*a*) The research project must be conducted substantially as outlined in the application, and subject to a special patent agreement.

(*b*) Funds may be spent only for items specified in the budget. Grantee must request advance approval of PHS before modifying the approved budget.

(*c*) Grantees are encouraged to rent equipment, rather than purchase it. Title to any equipment purchased with grant funds remains with the PHS.

(*d*) Funds may not be used for renovation and alteration. All grants to profitmaking institutions are subject to a complete and thorough audit after termination, and are limited to the indirect cost allowance of up to 15 percent of certain direct costs as in research grant awards to other types of institutions.

*Recommendation No. 3.*—NIH develop a separate policy governing the purpose and use of, and the eligibility conditions for, grants to help support national and international meetings of recognized scientific organizations.

The NIH agreed with the recommendation that policies and procedures designed for support of scientific investigation should not be applied to conference grants. A revised statement of policy and procedures under which NIH grant funds may be used for the support of scientific meetings has been released. This revised policy specifically prohibits the use of grants funds for (1) indirect costs, (2) honoraria in connection with such meetings, and (3) purchase of equipment. It also provides for much more detailed breakdown of proposed expenditures and forbids the transfer of funds from one category of expense to another without PHS approval.

*Recommendation No. 4.*—NIH seek to further improve its methods for coordinating research activities with other Government and private agencies so as to minimize unnecessary or unintended duplication of research in the health field.

The report notes, "NIH has developed workable arrangements for avoiding undesirable duplication of project support." NIH has taken additional steps to improve the information exchange system with

other Federal agencies. Data on NIH intramural research projects are now being made available to the Science Information Exchange. In this connection, it should also be noted that NIH helped found, and has long been a strong supporter of, the Science Information Exchange (formerly the Bio-Sciences Information Exchange), and that we attempt to utilize these facilities to the maximum. Continued attention is being given to means for improving coordination and facilitating communication among Federal agencies engaged in biomedical research.

*Recommendation No. 5.*—The President establish a uniform policy with respect to acceptable salary practices in the use of Federal research funds applicable to all Federal agencies making grants to educational and other research institutions.

The NIH heartily endorsed this recommendation and advocated the establishment of an interagency committee under the aegis of the Federal Council on Science and Technology or a special group under the President's Science Advisory Committee to study the problem in its total setting and to recommend uniform policies to be utilized by national agencies for the President's consideration.

*Recommendation No. 6.*—NIH initiate for a limited time a special developmental type grant as a direct means of stimulating research capability in those universities and professional schools which have training responsibilities in scientific fields related to health, but are not actively engaged in health research.

The number of institutions receiving NIH grant support is growing steadily. Between 1957 and 1961 the number of institutions receiving support grew from 572 to 1,224, an increase of more than 100 percent.

With respect to the few institutions not now participating in the NIH research program, the Fountain committee report indicates that the so-called limited participation is "due more to the paucity of project applications than to the high disapproval rate of proposals." While this observation applies generally to academic institutions as a whole, NIH is keenly sensitive to the need for developing research potential in health professional schools such as veterinary medicine, pharmacy, nursing, and social work. The NIH believes that the general research support grant, when fully implemented, will in large measure serve the purpose sought by the committee.

The first awards under this program have been made early this month to 86 schools of medicine, 49 schools of dentistry, and 6 schools of osteopathy. Upon receipt of a memorandum of consent from the Director of Budget, awards will be made to the 12 schools of public health, bringing the total of awards under this program to $20 million.

With respect to the larger issue raised by the committee's recommendation, it should be emphasized that scientific merit—the criterion of excellence—governs today's decisions to support research. This criterion assures support for the brilliant, young innovators as well as the mature investigators. Diversion of research funds from the talented to the mediocre would be a poor investment of public moneys both in the short run and over the long haul. No Federal agency now has a clear statutory role either to facilitate the upgrading of weaker institutions or to foster the creation of new universities. This may be a serious gap in national policy.

*Recommendation No. 7.*—The Congress consider action to permit the awarding of research project grants under the Public Health

Service Act to VA hospitals on the same terms and conditions as apply to non-Federal institutions.

When originally negotiated the Memorandum of Agreement between the National Institutes of Health, Public Health Service, and the Veterans' Administration intended that only those Veterans' Administration employees with bona fide affiliations with medical schools (usually a joint appointment) would be eligible to apply for NIH research grant support. The procedure necessarily called for submission of the application by the medical school since the PHS had no authority to make grants to a hospital of the Veterans' Administration. The report by the Committee on Government Operations points out that the procedure has been liberalized through interpretation to include any employees in a Veterans' Administration hospital which has a formal affiliation with a medical school. This liberalization has been accepted by the NIH in view of the close working relationships of such VA hospitals with the medical schools, our understanding being that the selection of VA staff in such hospitals is subject to the Deans' Committee approval and that the VA hospital becomes a part of the medical school complex.

The budget for fiscal year 1962 submitted to Congress by President Eisenhower contained, among the general provisions in the HEW section, a provision which would have made PHS research grants specifically available "to hospitals of the Service, of the Veterans' Administration, or to St. Elizabeths Hospital." The phrase "of the Veterans' Administration" is in italics identifying it as an amendment to existing language. In the appropriations bill (H.R. 7035), as enacted, this section (sec. 205) appeared without the amendment—it referred only to "research grants to hospitals of the Service or to Saint Elizabeths Hospital."

Once again, the Budget Bureau is revising in fiscal year 1963 section 206 of the general provisions to make appropriations of the Public Health Service available for research grants to hospitals of the Veterans' Administration. This will, if enacted, enable physicians and scientists of the Veterans' Administration to compete for research project grants through methods comparable to those used by scien tists in the Public Health Service hospitals and in the St. Elizabeths Hospital.

*Recommendation No. 8.*—The Director of NIH reviews the training policies and procedures of the Institutes and the Division of General Medical Sciences for the purpose of obtaining a greater degree of uniformity and simplification.

Studies of various aspects of NIH training policies and procedures of the nature recommended by the committee have been in process for 2 years, and extensive changes have been made in these programs. Substantial gains in the direction of uniformity and simplicity have been possible in the past year.

Examples of gains in uniformity which have recently been accomplished include (1) establishment of a central office and mechanism for receipt and referral of all training grant applications in the Division of Research Grants, (2) adoption of a common appointment form (2271), (3) procedure to provide for DRG editing and coding for informational purposes of all trainee appointment notifications submitted by all training grant program directors, and (4) establishment of

an Interbureau Advisory Committee to coordinate and seek uniformity of research and training policies and procedures.

Policies acceptable uniformly to all Institutes have been developed in regard to (1) indirect cost payments on stipends, (2) payment of tuition and fees, (3) carryover to succeeding year of unexpended funds, and (4) a common forward financing procedure.

There remain several differences in policies and practices among the several Institutes in regard to training grants which may be in the word of the committee report "be necessary in view of the individualized nature of NIH training programs." These are complex areas of activity that will be kept under constant surveillance.

*Recommendation No. 9.*—The Secretary of Health, Education, and Welfare carefully examine the existing programs and administrative arrangements for special-purpose training in the health field both in terms of overall Federal objectives in support of education and the impact of these programs on our educational institutions.

This recommendation was addressed to the Secretary. The NIH will be guided by action taken by that Office.

*Recommendation No. 10.*—The appropriate executive agencies and committees of the Congress give particular attention to the problem of attracting outstanding students to the field of medicine.

The scope of this recommendation exceeded existing NIH authority; however, it was believed that fellowships for medical students such as is provided for in legislation recommended by the administration and now before the Congress would substantially expand the opportunity for qualified youth to seek careers in medicine (H.R. 4999).

*Recommendation No. 11.*—Each participating institution be given the option of using either of two methods for computing the overhead allowance on supported research.

One method would be the continued use of a flat rate adjusted periodically to equal approximately 50 percent of the average rate of indirect expenses based on total direct costs for all grantee institutions as a group, as measured by appropriate cost accounting principles and procedures. In lieu of the standard rate, and in order to provide equitable treatment for those institutions possessing relatively high overhead costs, an institution would be allowed 50 percent of its actual indirect cost rate determined in the same manner as above.

The decision on indirect costs still rests with the Congress which has for 5 years restricted NIH to a 15-percent allowance for indirect costs notwithstanding the recommendation of the DHEW that this restriction be removed.

*Recommendation No. 12.*—No overhead be allowed on grants or grant items which do not entail actual indirect expenses, and an amount less than the regular rate be allowed when extramural research requires few institutional services.

*Recommendation No. 13.*—NIH reexamine its policy of making indirect cost payments on renovation and major equipment expenditures from grants for the establishment of clinical research facilities.

The NIH concurred with the soundness of committee recommendations Nos. 12 and 13. In the past, NIH had not excluded specific direct cost items from the computation of overhead since the 15-percent rate had resulted in less than full indirect costs for essentially all grantee institutions. The recent growth of program and center projects pointed up the need to single out these items for special attention.

Accordingly, procedures have been revised to exclude indirect costs on items such as (1) alteration and renovation, (2) fixed equipment that becomes part of real property, (3) rental equipment, and (4) conferences and symposia. Previous procedure will be continued to exclude indirect costs on research bed costs and on any part of the cost of equipment in excess of $2,500. Indirect costs will be negotiated on rentals and on such grants as those to medical schools in behalf of Veterans' Administration employees.

### STATISTICAL AND ANALYTICAL ACTIVITIES

In respect to your inquiry concerning the status of statistical and analytical activities for the grants program, I should like to emphasize, as Dr. Shannon did in the hearings before your subcommittee last August, that we do have in operation a statistical system which provides essential data covering the operations of the NIH extramural programs. This involves a framework of statistical and analytical activities ranging from the staff role of the Office of Program Planning in the Office of the Director, NIH, including the basic data collecting activities of the Statistics and Analysis Branch of the Division of Research Grants, to the program analytical activities of the several Institutes and Divisions. The concern that we have expressed with this system relates to problems involved in its improvement, taking advantage of the capabilities presented by electronic data processing and extending the valuable functional role that such activities can play in the conduct of the several programs of the National Institutes of Health.

Although progress has been made in respect to such improvements, a number of complex problems have been encountered. A major problem centers in the complexities involved in transforming the basis of our data processing activities from the current electric accounting machine methods to the use of large-scale electronic data processing equipment utilizing magnetic tape methods. This fundamental procedural change has involved extensive review and revision of the basic internal paper processing routines. Certain aspects of these changes are dependent upon the installation of new "data capturing" equipment. However, perhaps the biggest single problem we have encountered in this area has been the difficulty of acquiring skilled programers upon whose capabilities the translation of the present data forms into those compatible with electronic data manipulation is dependent. This is an extremely scarce category of personnel as the help wanted ads in the Sunday New York Times will testify.

The present salaries which the Federal Government has to offer in this area are just not competitive enough to enable recruitment and retention of a staff adequate to our needs.

The situation has also been complicated by the involved task of shifting from a small-scale computer (IBM 650) to large-scale equipment (Honeywell 800 system) which is now in process of being installed. Because of these difficulties we are at the present moment examining the feasibility of contracting with a suitable organization for the programing of our basic data processing routines and for the development of optimum systems for the maximum extension of electronic techniques in this area. Such systems would substantially

enhance the scope of data which can be encompassed within the basic statistical records and the speed with which such data can be made accessible for analytical and informational purposes.

As noted in my comments during the committee hearing, we have also been reviewing the organizational arrangement under which the extramural statistical and analytical activities are now being conducted. We are at the present moment studying certain alternatives to the present setup which may provide for a closer relationship in the conduct of these activities with the process of policy and decision-making in the overall direction of NIH activities. We shall be glad to report further to you and your committee concerning such additional developments in this area as they may emerge from our present activities.

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## APPENDIX 2.—STAFF REPORT ON AUDIT OF EXPENDITURES OF NIH RESEARCH GRANT FUNDS BY PUBLIC SERVICE RESEARCH, INC. (SUBSIDIARY OF DUNLAP & ASSOCIATES, INC.), STAMFORD, CONN.

CONTENTS



### INTRODUCTION

*Background*

The Intergovernmental Relations Subcommittee, Committee on Government Operations, has for some time been studying the operation of the extramural grant programs administered by the National Institutes of Health for the support of research and training activities conducted in university and other non-Federal facilities. NIH is a bureau of the Public Health Service within the Department of Health, Education, and Welfare.

In House Report No. 321, issued April 28, 1961, the Committee on Government Operations called attention to a number of areas in which NIH policies and administrative practices were inadequate to assure the proper and economical expenditure of grant funds and made certain recommendations for correcting those deficiencies. The subcommittee has continued its study of the NIH grant programs and its efforts to secure improved management in their administration.

*Purpose and nature of review*

An audit was made of the research grants awarded to Public Service Research, Inc. (PSR), in order to provide additional information concerning the extent to which NIH policies and procedures are adequate to insure the appropriate expenditure of public funds. The subcommittee had noted from NIH records that there were large discrepancies between the purposes for which the company had requested research grant funds and the manner in which these funds were reported as spent. Also, it had come to the subcommittee's attention that PSR had used grant funds for the payment of fees to an affiliated company for the recruitment of personnel.

While the amount of NIH research funds paid to PSR represents a small percentage of total NIH grant expenditures, NIH policies and management procedures provide little or no assurance that practices similar to those followed by PSR in the use of grant funds are not widely prevalent.

At the request of the subcommittee, the General Accounting Office assigned auditors to the subcommittee to review the expenditures made by Public Service Research, Inc., from NIH grant funds. Due to time limitations, detailed examination was made only of selected transactions, and all expenditures were not reviewed.

The findings are based on the review of pertinent records, tests of transactions, and discussions with PSR officers and other interested persons.

The audit review was conducted during January 1962, at the office of Public Service Research, Inc., 91 Prospect Street, Stamford, Conn.

SUMMARY OF FINDINGS

The audit of selected expenditures of NIH research grant funds by Public Service Research, Inc., established that—

(1) Grant funds were used to finance capital and other costs associated with establishing a new corporation. During the first year and a half of its existence, Public Service Research, Inc., acquired practically all of its office equipment and furnishings from Federal research grants and contracts.

(2) The corporation, according to its records, claimed a depreciation allowance in its Federal income tax returns for equipment purchased from NIH grants.

(3) The corporation's rent, maintenance, and moving expenses, and the expense of remodeling its rented quarters, were charged as direct costs to individual Federal grants and contracts.

(4) The corporation derived a profit in excess of its actual indirect costs from the overhead allowance (15 percent of total direct costs) paid by NIH to cover indirect costs.

(5) Fees paid by the corporation to its affiliate, Clark, Channell, Inc., for hiring expenses included a profit to the affiliate. Such fees were improperly billed as direct costs to particular NIH projects; the persons for whom hiring fees were paid worked on several projects and, in one case, the employee performed no research on the project to which his fee was charged.

(6) Salary costs were improperly charged to NIH grants for (*a*) time spent by corporate officers in meetings of directors or

stockholders and in the administration of corporation business; (*b*) time spent by a corporate officer as a consultant to NIH, for which he was also paid $50 a day plus travel expenses; and (*c*) an employee who was hired to staff the company's Washington office and performed no research on the project to which his salary was charged.

(7) Various expense items were incorrectly classified as direct costs of particular grant projects, and in several instances entertainment expenses were improperly charged to NIH grants.

(8) Travel expenses were incurred in some instances for purposes which do not appear to have a direct relationship to the projects charged.

FINDINGS

*Public Service Research, Inc.*

Public Service Research, Inc., a commercial firm operating for profit, was formed on July 3, 1959, as a subsidiary of Dunlap & Associates, Inc., which held 2,000 of the 3,050 shares of PSR stock issued at the time of incorporation. Practically all of the remaining stock issued was held by officers of Dunlap & Associates. On June 29, 1961, Dunlap & Associates, Inc., acquired all shares of PSR stock not already held in exchange for shares of its own stock (exhibit A).

From date of incorporation through the last board meeting of record, held on December 4, 1961, the PSR board of directors, consisted of three members—Dr. Jack W. Dunlap, chairman; Dr. Herbert H. Jacobs, president; and Ralph C. Channell. As of December 4, 1961, these directors were president, vice president, and executive vice president, respectively, of Dunlap & Associates, Inc. Ralph C. Channell was also chairman of the board of Clark, Channell, Inc., an affiliated company. Since December 9, 1961, Dr. Robert J. Schreiber has served as president and a director of PSR. He was previously vice president of the firm.

Public Service Research, Inc., was established for the stated purpose of conducting fundamental and applied research in public health, education, welfare, safety, and related fields. Its research work is housed in rented quarters in Stamford, Conn. An office was maintained by the company in Washington, D.C., from July 1960 through March 1961.

As of December 30, 1961, PSR had 10 full-time and 11 part-time employees, 4 of whom divided their time between activities of PSR and Dunlap & Associates. PSR, from date of incorporation to December 30, 1961, had used 20 Dunlap & Associates employees for some of its work. The permanent and part-time staff of PSR consists of 6 senior scientists, 3 research associates, 1 research assistant, and 11 technical assistants.

*Source of funds*

From July 3, 1959, to December 31, 1961, PSR received cash funds from all sources in the amount of $445,161, of which $426,601 (95.9 percent) came from Federal sources and $378,596 (85.1 percent) from NIH grants alone. A total of $18,560 (4.1 percent of all funds) was obtained from nongovernmental sources, including the sale of capital stock (exhibit B.)

For the period July 3, 1959, to January 28, 1960, the date on which stock subscriptions were paid, PSR operated solely with funds from NIH grant RG–6073(R1). Although 2,000 shares of the total original stock issue of 3,050 shares were subscribed to by Dunlap & Associates, Inc., the latter did not pay for this PSR stock until more than 6 months after the corporation was formed. On April 3, 1959, NIH research grant RG–6073(R1) in the amount of $86,020 was awarded to Dunlap & Associates, Inc., for the period of April 1, 1959, to March 31, 1960 (later extended to August 31, 1960). On April 27, 1959, NIH made the first grant advance of $43,010, which was never deposited by Dunlap & Associates, Inc. Dunlap & Associates, Inc., as a result of a meeting held on June 16, 1959, with NIH representatives, obtained approval for transferring the grant RG–6073(R1) to an existing or new corporation. On July 3, 1959, PSR was established. The expenses incurred (about $2,500) by Dunlap & Associates, Inc., prior to the transfer of this grant and the undeposited check of $43,010 were transferred to PSR.

*Indirect costs*

The appropriation act permits NIH to pay grantees up to 15 percent of the direct costs of a project as an allowance to cover the indirect or overhead costs of performing research. With certain exceptions, it is NIH's policy to allow grantees a flat 15 percent overhead rate. The purpose of the indirect cost allowance is to compensate an institution or firm for the multipurpose facilities and "housekeeping" services that are normally required for the conduct of a research project. These facilities and services ordinarily include such things as office and laboratory space and equipment, library facilities, light, heat, maintenance, and administrative services.

While PSR accumulated total overhead expenses (identified in its records as general and administrative costs) of only $33,000 from incorporation in July 1959, to December 31, 1961, it charged overhead costs totaling $47,500 to NIH grants. Moreover, this amount ($47,500) does not include overhead allowances received from several other grants and contracts.

In a completed Public Health Service contract (SAph 76293), PSR was allowed, in a final invoice dated August 23, 1961, an amount of $2,260, and an indirect cost rate of 6.66 percent of all direct costs under the contract, to cover general and administrative expenses. Despite the establishment of a 6.66 percent overhead rate for the Public Health Service contract, NIH has continued to allow PSR an overhead rate of 15 percent.

It should be noted that the indirect cost payment is computed as a percentage of total direct costs. Consequently, when charges which are properly overhead expenses are treated as direct costs of a project, the Government not only finances 100 percent of such costs but also pays an indirect cost allowance on the misclassified items as well.

*Equipment purchases*

The total cost of equipment items, valued at $50 or more, purchased by PSR from its inception to December 31, 1961, amounted to $16,235 (general purpose $8,335, and special purpose $7,900). Of this amount, $11,373 was charged to NIH grants, $4,397 was charged to another Federal grant and to a Public Health Service contract, and only $465

($340 for a car and $125 for a file cabinet) was charged to corporate funds. In addition, $743, covering the cost of dividing the rented area which houses the corporation's offices was charged as a direct cost to NIH grants.

Under the NIH policy in effect until July 1, 1960, equipment procured from grants awarded prior to this date became the property of the firm acquiring it. Of the $11,373 charged to NIH grants, title to equipment costing about $7,500 (charged to the first two grants awarded April 3, 1959, and December 1, 1959) vests with PSR, while title to about $3,900 vests with NIH. According to the company's records, it not only charged to Federal funds the cost of the equipment to which it was given title (plus $1,125, representing a 15 percent overhead allowance), but also claimed a depreciation allowance of $2,576 for this equipment in its Federal tax returns for the fiscal years ended March 31, 1960, and March 31, 1961. By taking this depreciation, the corporation, in effect, reduced its actual income for tax purposes. For the $3,900 of equipment owned by NIH, the company has not established a liability to the Government for the funds advanced to purchase this equipment, but instead has treated the cost of the equipment as a direct cost of the project. Under this accounting practice the company has claimed 15 percent of the cost of this equipment as overhead allowance and, consequently, has received $585 for acquiring the equipment for the Government.

The following details were ascertained from a review of equipment transactions under the first two NIH grants received by PSR. NIH grant RG–6073(R1), for $86,020, included $3,800 for the procurement of office equipment. Grant RG–7025, for $98,644, also contained provision for office equipment ($3,783) and various instruments and devices ($2,500). Together these two grants provided $7,583 for the purchase of office equipment. PSR bought one less calculator than requested, but purchased considerably more items of office equipment at a total cost of $8,813. These purchases include some office furnishings such as carpets, curtains, venetian blinds, pictures, desk trays, and lamps which were not requested in either of the grant applications (exhibit C). Moreover, while one grant provided $2,500 for instruments and devices, PSR procured only a single such item costing about $34. According to the president of PSR, this piece of equipment was never used. Also, subsequent to the extension of the period of NIH grant RG–6073 (R1) from March 31, 1960, to August 31, 1960, PSR charged the cost of two desks ($168.97 each) to this grant. The cost of one calculator ($1,075) and one electric typewriter ($715) were charged in October 1960 and January 1961, respectively, to a grant (RG–7025) which was to expire on January 31, 1961.

A contract (HEW: SAph 76293) for $37,390, awarded to PSR by the U.S. Public Health Service on December 8, 1960, authorized the procurement of special purpose and general office equipment costing over $5,000, with title to remain with the Government. The work covered by the contract was performed between December 20, 1960, and April 15, 1961. On December 11, 1961, PSR submitted a bid to the Public Health Service for the purchase of most of the equipment that was not declared expendable at prices substantially below the Government's costs. For example, a tape recorder costing $160.76

was priced at $60 and oscilloscopes costing $625 each were priced at an average of about $200 each. This equipment was offered for sale to PSR on February 15, 1962, at the bid price. When the transaction is completed, the Government will recover approximately one-third of the cost of this equipment used only a few months on the project.

Included in the PSR bid proposal was a request to use, rather than purchase, one oscilloscope and one tape recorder in connection with NIH grant B–2875. This request was agreed to by the Public Health Service despite the fact that no showing was made or required that the equipment is necessary for the grant project. Moreover, in a new grant (MY–5888) awarded to PSR during March 1962, NIH provided funds for the purchase of a tape recorder even though the company now has two such instruments on hand from the completed Public Health Service contract.

Title to $1,312 of equipment acquired under a National Science Foundation grant presently vests with the Government. This grant will terminate in September 1962.

In addition to acquiring practically all of its office equipment and furnishings from Federal grants and contracts, PSR also charged the cost of dividing the area rented at its new location, 91 Prospect Street, as a direct cost to Federal grants and contracts. The total cost of this work was $877, of which $743 (plus 15 percent for overhead expenses) was charged to NIH grants. These improvements had not been requested in any of the firm's approved grant applications.

*Equipment items less than $50 each.*—From date of incorporation to December 31, 1960, PSR expended $6,695 for equipment items costing less than $50 each. Of this amount, $3,783 was charged to various NIH grants and $2,912 to other Government grants and contracts.

All of these items were charged as direct costs, rather than overhead expenses. However, many of the items purchased, such as pictures, waste baskets, floor covering, desk trays, curtains, lamps, and venetian blinds, do not appear to be the type of equipment that is necessary for the conduct of a research project and, therefore, allowable as a direct cost.

*Hiring expense*

From the date of its incorporation (July 1959) to December 31, 1961, PSR expended about $4,900 for hiring expense. Of this amount, $4,738 was charged to NIH grants, including $3,628 in fees paid to Clark, Channell, Inc., a company in which Dunlap & Associates, Inc., had a financial interest. The remaining $1,110 charged to NIH grants was primarily for advertising, travel reimbursements to prospective employees, and dinner expenses.

Three employees were hired by PSR through Clark, Channell, Inc. One of these employees was hired for the Washington, D.C., office as a result of an oral hiring agreement between PSR and Clark, Channell, Inc. (job A), and the other two employees were hired as a byproduct of a hiring agreement between Dunlap & Associates, Inc., and Clark, Channell, Inc. (job B). These two agreements were treated by Clark, Channell, Inc., as two jobs, and assigned separate job numbers.

PSR was originally billed $2,350 by Clark, Channell, Inc., in June 1960, for Job A. The person for whom this fee was incurred was separated from PSR after being employed about 2 months. Dunlap

& Associates, Inc., directed Clark, Channell, Inc., to cancel this billing, and a credit memo in the amount of $2,350 was issued in August 1960. Later in August PSR was rebilled $253 for this service. PSR paid this fee in September 1960, and charged it to NIH grant RG–6073 (C1). However, during his employment with PSR, none of the employee's salary ($3,099) was charged to this grant. Instead, $1,630 of his salary was charged to general and administrative expense and $1,469 was charged to NIH grant RG–7025, although he performed no research work on that project.

PSR was billed $3,376 by Clark, Channell, Inc., for the two employees hired through job B. Clark, Channell's records did not identify the costs applicable to the two employees hired by PSR since the recruitment effort was directed toward selecting employees for various Dunlap & Associates positions and costs were accumulated for the entire job. The fees paid by PSR consisted of $900 and $2,476 computed on the basis of 15 percent of each employee's first-year salary. A comparison of the total billing and the costs recorded for job B indicate that the fees charged PSR include a profit for its affiliate, Clark, Channell, Inc.

With respect to the services of the employees hired through job B, it was found that they worked on several PSR projects, although their entire fees of $900 and $2,476 were charged, respectively, to NIH grants RG–6073 (R1) and RG–7025. This employment pattern suggests their hiring was intended to fill general staffing requirements of the firm, rather than intended for any specific NIH project. It should be noted that PSR did not request funds for hiring expenses in its grant applications.

*Salary charges*

From the date of incorporation (July 1959) through December 31, 1961, salarly payments of $67,800 (exclusive of leave and holiday costs amounting to $6,400) were paid to PSR officers. Of this amount, $58,200 was charged as direct costs to NIH grants, $5,300 was charged to other Government grants and contracts, $3,200 was charged to non-Government projects, and only $1,100, or 1½ percent, was charged to general and administrative expenses. During this period, six meetings of directors or stockholders were held during regular working hours and PSR recorded salary payments to one or more of the officers attending these meetings as direct charges to NIH grants. Only one instance was found where any part of the salary of an officer who attended these meetings was charged to general and administrative expenses (exhibit D).

During its first 9 months of operation, PSR charged only 11 hours of salary costs to general and administrative expenses for corporation officers.

For an employee hired by PSR to staff the Washington office, a total of 191 hours ($1,469) was charged to NIH grant RG–7025 and 212 hours ($1,630) was charged to general and administrative expenses. A review of the research project file and an interview with this employee revealed that he did not participate directly in grant project RG–7025 and little, if any, of his time was actually spent on research work.

*Double salary charges*

Dr. Herbert H. Jacobs, director of research and former president of PSR, has served as a consultant to NIH since June 29, 1959. He is paid $50 per day, in addition to travel expenses, when actually serving in this capacity. On nine separate occasions, while being reimbursed by NIH as a consultant, Dr. Jacobs also charged a total of $825 to NIH grants for the same day (exhibit E).

Dr. Jacobs has been a member of the NIH Accident Prevention Study Section since June 29, 1959. As such, he was a member of that advisory panel when it reviewed and approved grant RG–7025, for which he was the principal investigator, and at the time NIH renewed its support of grant RG–6073(R1), for which he was identified as senior scientist. However, in accordance with NIH practice, Dr. Jacobs did not take part in the study section's consideration of his company's grant applications.

*Rental expense*

In August 1959, PSR rented space at 65 South Street in Stamford, Conn., to house its operations. PSR maintained space at this address for almost 2 years. Of the total rental cost of $3,900, $3,620 was charged to the first two NIH grants (RG–6073(R1) and RG–7025), and the remainder to a Public Health Service contract. None of the $3,900 rental cost was charged to general and administrative expenses, although at least part of the rental cost should have been so charged.

Since PSR moved into its new quarters on Prospect Street, Stamford, Conn. (March 1961), the rental of $700 per month has been allocated to all projects, including administration, on the basis of an estimated percentage of the total space required for each project for a given period.

For the period July 1960 through March 1961, the rental cost of the Washington office (Munsey Bldg.) was $1,270, of which approximately $100 was charged to grant RG–7025 and $1,170 to general and administrative expense. According to the president of PSR, this office was maintained subsequent to the termination of its only employee (July 22, 1960) for use by PSR officers when in Washington on business. He stated that PSR had considered hiring someone else to head this office but later decided to close it.

From date of incorporation (July 1959) through December 31, 1961, PSR did not request a rent item in any of its grant applications, including applications for the renewal of grants, despite the fact that rent was consistently paid directly from grant funds.

*Travel expense*

Based on a sample test of travel expenses of PSR employees, no instances were found on duplicate travel charges. In several instances travel expenses were incurred for the purpose of attending professional society meetings which do not appear to have a direct relationship to the projects charged.

*Expenses incorrectly treated as direct costs*

*Maintenance and repair.*—For the company's first 9 months ending March 31, 1960, the PSR books showed that approximately $187 was incurred for maintenance and repairs. Of this amount, about $140 was for cleaning of the premises occupied by PSR. The $187 was not charged to general and administrative expenses but was charged in-

stead to NIH grant RG–6073(R1). In subsequent periods, maintenance and repair expenses have been charged to various project accounts and to administrative expense on the basis of "reasonableness."

*Books, subscriptions, and magazines.*—NIH policy provides that books and periodicals necessary to the conduct of an individual research project may be purchased from grant funds. However, grant funds may not be used for the purchase of books to be placed on library shelves for general use by staff. Direct charges were made to grants RG–6073(R1) and RG–7025 for such general reference materials as a private secretary's Encyclopedia Dictionary, subscriptions to New York Times and New York Herald-Tribune, and the Statistical Abstract of the United States.

*Miscellaneous charges.*—A review of vouchers selected at random revealed that such items as hand soap, toilet tissue, office supplies, accounting supplies, light bulbs, paint and paint roller, and paper towels were charged to NIH grants RG–6073(R1) and RG–7025.

The expense incurred, $187, for moving from 65 South Street (old location) to 91 Prospect Street (new location) was charged to NIH grants RG–6073(C1), RG–7025(C1), and B–2875.

*Miscellaneous unallowable expenses*

Expenses for entertainment, meals, refreshments, and parties may not be charged against a grant account under NIH policy.

NIH grant RG–7025 was charged with $55.11 as "meeting expenses." This entire amount was spent for luncheons and dinners, for which PSR employees were reimbursed. NIH grant RG–6073(R1) was charged with $7.50 as "registration fees," when the expense was actually for a luncheon for which a corporate officer was reimbursed. Approximately $82 for luncheon and dinner expenses for PSR employees and job candidates were found included in the hiring expenses charged to NIH grants.

EXHIBIT A.—*Exchange of stock, Dunlap & Associates, Inc. (D. & A.) for Public Service Research, Inc. (PSR), June 29, 1961*

| Stockholder | Title | PSR shares exchanged [1] | Dunlap & Associates shares received [2] |
|---|---|---|---|
| Dunlap & Associates, Inc | | 2,000 | |
| Jack W. Dunlap | President, Dunlap & Associates and chairman of board, PSR. | 300 | 780 |
| Ralph C. Channell | Executive vice president and a director, Dunlap & Associates; chairman of board, Clark, Channell, Inc.; a director, PSR. | 300 | 780 |
| Herbert H. Jacobs | Vice president and a director, Dunlap & Associates; a director, PSR, president of PSR until December 1961. | 800 | 2,080 |
| Alvin M. Miller | Treasurer, Dunlap & Associates | 100 | 260 |
| Donald E. Payne | Secretary-treasurer, PSR | 100 | 260 |
| Robert J. Schreiber | President and a director, PSR, since December 1961. | 500 | 1,300 |
| Total | | [3] 4,100 | 5,460 |

[1] Source: PSR stock record book.
[2] Source: Dunlap & Associates' books of account.
[3] 1,000 shares (150 Jack W. Dunlap, 150 Ralph C. Channell, 400 Herbert H. Jacobs, 50 Donald Payne, 250 Robert Schreiber) issued on June 28, 1961, the day prior to Dunlap & Associates acquiring outstanding minority interest.

EXHIBIT B.—*Schedule of funds made available to PSR, by source, from incorporation to Dec. 13, 1961*

| Source | Period of grant | Amount | Percent |
|---|---|---|---|
| NIH grants: | | | |
| RG-6073(R1) | Apr. 1, 1959, to Aug. 31, 1960 | $86,020.00 | |
| RG-6073(C1) | Sept. 1, 1960, to Nov. 30, 1961 | 84,953.00 | |
| RG-7025 | Dec. 1, 1959, to Jan. 31, 1961 | 98,644.00 | |
| RG-7025(C1) | Feb. 1, 1961, to Jan. 31, 1962 | 46,142.00 | |
| B-2875 | Sept. 1, 1960, to Aug. 31, 1961 | 15,464.00 | |
| B-2875(C1) | Sept. 1, 1961, to Aug. 31, 1962 | [1] 6,872.00 | |
| B-3056 | Jan. 1 to Dec. 31, 1961 | 7,475.00 | |
| MY-5065(A) | May 1, 1961, to Apr. 30, 1962 | 4,025.00 | |
| GN-8035 | do | [2] 23,037.00 | |
| M-5364 | Sept. 1, 1961, to Aug. 31, 1962 | [3] 5,964.00 | |
| Total | | 378,596.00 | 85.1 |
| Other Government grants and contracts: | | | |
| NSF: C-180 | Oct. 14, 1960, to Sept. 14, 1962 | [4] 10,813.99 | |
| HEW SAph 76293 | Sept. 15, 1960, to Apr. 15, 1961 | [5] 37,191.62 | |
| HEW SAph 76970 | June 15, 1961, to June 1, 1962 | [6] 0 | |
| Total | | 48,005.61 | 10.8 |
| Other sources: | | | |
| Paid in capital and surplus | | 8,200.00 | |
| Dunlap & Associates PO G2716, Mar. 1 to 31, 1961. | | 800.00 | |
| Kalamazoo Foundation, June 16, 1961, to Feb. 28, 1962. | | [7] 5,000.00 | |
| Sale of self-sponsored research data | | 4,560.00 | |
| Total | | 18,560.00 | 4.1 |
| Total | | 445,161.61 | 100.0 |

[1] Total grant, $13,744.
[2] Total grant, $30,716.
[3] Total grant, $11,928.
[4] Total grant, $28,800.
[5] Total contract, $37,390.
[6] Total contract, $31,304.
[7] Total amount, $20,000.

Source: PSR general ledger and general journal.

EXHIBIT C.—*Schedule of equipment items budgeted and procured by PSR under NIH grants RG–6073(R1) and RG–7025*

| Item | RG–6073(R1) | | | | RG–7025 | | | |
|---|---|---|---|---|---|---|---|---|
| | Budget request | | Procured | | Budget request | | Procured | |
| | Number | Amount | Number | Amount | Number | Amount | Number | Amount |
| Various instruments and devices | | | | | [1] | $2,500 | 1 | [2] $33.79 |
| Calculators | 2 | $2,000 | 1 | $1,075.42 | 1 | 1,000 | 1 | 1,075.42 |
| File cabinets | 3 | 240 | | | 6 | 480 | 1 | 124.76 |
| Desks | 2 | 350 | 5 | 844.85 | 3 | 525 | 4 | 675.89 |
| Chairs | 2 | 100 | 12 | 526.08 | 3 | 150 | 10 | 419.63 |
| Tables | 2 | 160 | 4 | 361.59 | 3 | 240 | 3 | 317.81 |
| Electric typewriters | 1 | 600 | 1 | 715.13 | 1 | 600 | 1 | 715.13 |
| Adding machines | 1 | 350 | 1 | 292.48 | 2 | 788 | | |
| Typewriter platform | | | 1 | 34.76 | | | | |
| Wastebaskets | | | 4 | 18.13 | | | 4 | 18.13 |
| Bookcases | | | 5 | 166.24 | | | 3 | 107.85 |
| Desk trays | | | 3 | 18.30 | | | | |
| Letter files | | | 3 | 449.53 | | | | |
| Curtains | | | 2 | 23.72 | | | | |
| Carpets | | | 3 | 208.58 | | | | |
| Pictures | | | 3 | 25.80 | | | | |
| Lamps | | | 3 | 64.98 | | | 3 | 52.18 |
| Venetian blinds | | | 7 | 34.51 | | | | |
| Chalk board | | | 4 | 104.57 | | | | |
| Manual typewriter | | | | | | | 1 | 230.66 |
| Calculator stand | | | | | | | 1 | 37.03 |
| Items under $10 | | | | 37.23 | | | | 12.83 |
| Letter trays | | | | | | | 8 | 24.39 |
| Total | 13 | 3,800 | [3] 62 | 5,001.90 | 19 | 6,283 | [3] 41 | 3,845.50 |

[1] Not specified.
[2] This item classified as a dual-control brake is only item not office furniture or furnishings.
[3] Does not include various items costing less than $10.

Source: PSR grant applications and expenditure reports.

EXHIBIT D.—*Schedule of PSR selected administrative time (director or stockholder meetings) charged to NIH grants and other projects*

| Date of meeting | Time started [1] | Person for whom charged | Hours charged [2] | Project charged |
|---|---|---|---|---|
| July 6, 1959 | 4:00 p.m. | Herbert Jacobs | 7½ | RG-6073(R1). |
| | | Robert Schreiber | 7½ | RG-6073(R1). |
| Nov. 12, 1959 | 10:30 a.m. | Herbert Jacobs | 8 | RG-6073(R1). |
| Mar. 21, 1960 | 10:00 a.m. | Robert Schreiber | 8 | RG-6073(R1). |
| May 9, 1960 | 9:30 a.m. | do | 8 | RG-7025. |
| Dec. 23, 1960 | 9:14 a.m. | Herbert Jacobs | 8 | RG-7025. |
| | | Robert Schreiber | 8 | RG-7025. |
| | | Donald Payne | 8 | RG-7025. |
| Sept. 21, 1961 | 9:00 a.m. | Herbert Jacobs | 4 | RG-7025(C1). |
| | | | 4 | Administration. |
| | | Donald Payne | 8 | RG-7025(C1). |
| | | Robert Schreiber | 3 | RG-7025(C1). |
| | | | 5 | HEW: SAph 76970. |

[1] The minute book did not record the time of adjournment.
[2] Represents total time charged for that day.

Source: PSR minute book and time and payroll records.

EXHIBIT E.—*Schedule of double salary payments from Government funds to a PSR officer*

| Date | Consultant fee paid by NIH | Salary charged to NIH grants [1] | | Leave charged to NIH grants [2] | Indirect cost allowance on salary and leave [3] | Total to NIH grants |
|---|---|---|---|---|---|---|
| | | RG-6073(R1) | RG-7025 | | | |
| Jan. 8, 1960 [4] | $50.00 | $77.78 | ---------- | $6.55 | $12.65 | $96.98 |
| May 4, 1960 [5] | 50.00 | ---------- | $77.78 | 6.55 | 12.65 | 96.98 |
| Aug. 10, 1960 [4] | 50.00 | 77.78 | ---------- | 6.65 | 12.65 | 96.98 |
| Aug. 11, 1960 [4] | 50.00 | 77.78 | ---------- | 6.55 | 12.65 | 96.98 |
| Aug. 12, 1960 [4] | 50.00 | 77.78 | ---------- | 6.55 | 12.65 | 96.98 |
| Jan. 4, 1961 [4] | 50.00 | ---------- | 77.78 | 6.55 | 12.65 | 96.98 |
| Jan. 10, 1961 [5] | 50.00 | ---------- | 38.89 | 3.77 | 6.32 | 48.98 |
| Jan. 11, 1961 [5] | 50.00 | ---------- | [6] 77.78 | 6.55 | 12.65 | 96.98 |
| Apr. 26, 1961 [5] | 50.00 | [6] 38.89 | [6] 38.89 | 6.55 | 12.65 | 96.98 |
| Total | 450.00 | 350.01 | 311.12 | 56.17 | 107.52 | 824.82 |

[1] Represents total salary cost of official recorded by PSR for that day.
[2] Computed according to PSR's policy of accruing leave on basis of direct salary charges (0.084 × hours of salary charges × salary rate).
[3] Computed on basis of 15 percent allowed by NIH.
[4] NIH consultant fee paid for official on field trip for NIH.
[5] NIH consultant fee paid for official serving on study section panel.
[6] Continuation grants.

Source: NIH payroll records and vouchers; PSR time and payroll records.